The American Journal of
CLINICAL MEDICINE
Dependable Therapeutic Fact for Daily Use

DECEMBER M C M X V

This Is Your Journal

DOCTOR, we have a pleasant surprise for you. Our January Annual Progress Number will alone be worth the price of a year's subscription; but turn to page 1162 and study our splendid program for 1916.

Are you paid up for 1915? Is your renewal in for next year? If not, why not attend to the matter at once and, by so doing, end the year right and be in line for a good start in 1916?

When you write your check, why not make it big enough to include a subscription for some brother doctor? Can you think of a nicer Christmas present?

Merry Christmas for you and yours, Doctor; and may the New Year be happy and prosperous for us all!

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Three Kinds of Physicians

DR. THEODORE WILLIAM SCHAEFER, in *The Therapeutic Record*, writes of three types of physicians who, according to him, comprise the entire medical profession. The first of his types is the dollar-chaser, of whom, God knows, we have a great plenty, even if we do not agree with the Kansas City man in his including the specialists, along with "impressionists, thaumaturgists, and prestidigitators." One characteristic he gives of men of this class is the habit of "talking shop" at medical meetings—henceforth beware, O silver-tongued orator!

The third of his types is the research-man, upon whose portrayal Doctor Schaefer expends his choicest efforts, his most complimentary adjectives. Little appreciated, devoted to his work. the research-physician sojourns in the solitude of his laboratory, prying into the secrets of nature and endeavoring to discover some new truth. He is the one who ought to have all the patients; however, the "other fellows" get them. But the portrait seems false when we are told that this man "sacrifices his last savings in his blind zeal to make a discovery that would benefit mankind."

Between the two, Doctor Schaefer switches in the following caricature:

"To the second variety, belong all those sympathetic physicians who are devoting and sacrificing their lives to the care of the sick and injured for the mere love, glory, and pastime of the work, making the financial side of the practice of medicine a mere bagatelle or secondary incident rather than the object of its work. They look upon the pursuit of medicine as a kind of plaything or a mere benevolent hobby to idle away their time. With juvenile delight, they try every new medicine placed upon the market and experiment with the latest mechanical appliances as well as with diagnostic and surgical instruments. It is within the capacity of this kind of physicians to be popular, and they can usually be found moving busily about in the circle of society gatherings. Their names frequently flourish in the society columns of the daily newspapers. This class, as a rule, does not accumulate much wealth, except when specially favored by the fortunate possession of a rich inheritance or a wife who has means."

Do we clinicians find the practice of medicine a "pastime"? It comes nearer tragedy, often. Tragedy to the doctor, his family suffering for the necessaries of civilized life while he is bending over the bed of some

suffering pauper. Practice a "plaything," a "mere benevolent hobby to idle away their time!!!" Where can Doctor Schaefer have obtained the basis for such a distorted view? Is there no such thing as a sincere and honorable desire to alleviate the ills of humanity and save valued lives from premature extinction? No sense of duty, of obligation, no such lively sympathy with suffering as leads to the earnest effort to relieve it?

Do we "try every new medicine with juvenile delight"? We always supposed, when we did so try, that we were seeking to improve our methods of treatment and for tbis reason gave a fair trial to any device that promised enough to justify it.

Possibly we are popular; not so much, mayhap, with our tailor and grocer and butcher, but with those who have reason to bless us. Yes, Doctor Schaefer is right—we do not accumulate wealth—we haven't time; we are too busy with Hodge's attack of typhoid fever to spend hours over Lady Maud's whimsies.

Why glorify the discovery of a new thing exclusively? Who is to try it practically and utilize it, when such experimenting is frowned upon and dubbed mere idle curiosity? Who is to put the new things, discovered by the research-man, to use, and why is it that only a new discovery is of value?

In which class does he place the modern research-men who have held the control of their discoveries and pocketed millions from their sale? How do they differ from the first class—the dollar-chasers? Is a mark-chaser better, intrinsically, than a dollar- or a franc- or a guinea-chaser?

If all the patients go to the research-man, when is he to get time for research? And what will he do with them—treat them by the best means applicable to their needs or try out his new discoveries?

Of all the types of the medical profession (and there are far more than three), we honor and love most the doctor unlimited—just plain doctor—the man who travels the roads and climbs the hills at all seasons and at all hours, never half paid for his services, always in financial stress, but true and good to the backbone and loved by every decent member of the community. This "just plain doctor" does not have time or equipment for original research, but he has all time to travel to Skunk Hollow and sit by the bedside of the fever-stricken child. He does not talk in society meetings, for he always has a case too bad to leave when the meeting is called; and, besides, he is too modest to talk before so many illustrious confreres. He hears of the million paid for salvarsan, and wishes he had a ten to buy his winter-suit. Now and then some Riley arises, who sees him as he is, and the doctor blushes at the warm appreciation expressed and wonders whether he really is all that.

The research-man is welcome to all he gets, of lucre and of fame; the dollar-chaser may rake together a big pile, therewith to ruin his children, as also to help us realize the necessity of another world to even up the wrong of this one; but, we hold with the doctor who spends his life in caring for the sick—the real doctor.

When men do not love their hearths, nor reverence their thresholds, it is a sign that they have dishonored both, and that they have never acknowledged the true universality of that Christian worship which was, indeed, to supersede the idolatry, but not the piety, of the pagan. Our God is a household God, as well as a heavenly one; He has an altar in every man's dwelling; let men look to it when they rend it lightly or pour out its ashes. —John Ruskin.

FOOT-AND-MOUTH DISEASE

A little more than one year ago, the announcement was made that foot-and-mouth disease had broken out in the United States; however, the Federal Bureau of Animal Industry and the various state livestock sanitary boards, by vigorous measures—which consisted in destroying all infected animals and disinfecting the premises—succeeded, in spite of many obstacles and at great expense, in overcoming the epidemic.

There can be no question that the plan adopted was the most efficient and economical available. The amount of money expended in this work is trifling compared with the appalling loss that in the end would result should this animal-scourge become permanently extablished in this country. Those who are opposing the necessarily radical measures for eradicating foot-and-mouth disease do not comprehend the disaster that inevitably would result were this plague to continue; but, as usual, it is "the pebble in the shoe, and not the load upon the back," that hurts.

This outbreak of foot-and-mouth disease has been characterized by the unusually high susceptibility of swine to the infection and the relative immunity of sheep. Comparatively few cases of infection with this disease in humans have been reported, and most of these occurred in the early part of the outbreak, when public excitement was not yet pronounced and the diagnosis lacked veri-

fication. *The Bulletin of the Johns Hopkins Hospital* for October (1915) contains an excellent report of a case of the disease in man, illustrated by remarkably fine colored plates. The article also reviews the subject of foot-and-mouth disease and gives an excellent bibliography.

After nine months of vigorous efforts, when the disease appeared to be wiped out, the discouraging announcement was made that there was a fresh outbreak, brought on by infected antihogcholera-serum sent out by a concern located at the Union Stockyards in Chicago. As serum-plants engaged in interstate trade must be licensed by the Department of Agriculture and are inspected by the Bureau of Animal Industry, considerable criticism has followed, particularly in some agricultural and livestock periodicals.

In reply to these criticisms, an official statement regarding the whole situation has recently been made by the Department of Agriculture. The Bureau of Animal Industry made a careful investigation, but it has not been able to determine how the virus of the disease was introduced into this country; however, the disease was first discovered in the vicinity of Niles, Michigan. The Department of Agriculture also states that the infected antihogcholera-serum was tested upon animals before it was permitted to be sent out. Even when the evidence from the field indicated that the serum was infected, it was repeatedly retested, and the 62nd animal tested became affected with the disease.

This emphasizes the fact that we really know comparatively little about the causative agent of some transmissible diseases, particularly those caused by an ultramicroscopic organism or filterable virus, to which latter class the virus of the infection in question seems to belong.

Every unusual fact, such as the one instanced, opens up a narrow vista, not as yet anticipated by any investigator, into the vast unexplored regions in the realms of nature.

The federal authorities, after having taken the careful precautions shown by past experience to be effective, cannot be blamed for lacking information that is not in existence. What is needed is, vigorous support, professional and lay, of all measures calculated to hasten the elimination of this pest, and which will not hamper the effective work by bickering and recrimination. We believe there should be a more thorough supervision, by the federal government, of the various establishments that supply biological products for veterinary use. The use of such products is rapidly increasing, and they are efficient therapeutic agents; but, at the same time, the possibilities of their carrying transmissible diseases to the livestock of the country is also great, so that obviously some central authority having ample powers should protect the livestock-industry from such disaster.

Furthermore, we believe that the location of establishments for the production of biologic preparations in the vicinity of packing-centers or in other localities where there is a large traffic in animals is fraught with unusual risk to our livestock as to transmissible diseases. Such establishments ought to be removed as far as possible from possible sources of contagion.

Quarantines for the control of transmissible diseases, human as well as animal, always work hardships. Selfish interests have always hampered the best officials actuated by the highest motives in carrying out efficient measures. Our Federal Bureau of Animal Industry is eminently qualified to deal with transmissible animal-diseases, and it should be vigorously supported.

The morning drum-call on my eager ear
Thrills unforgotten yet; the morning dew
Lies yet undried along my field of noon.
But now I pause awhiles in what I do,
And count the bell, and tremble lest I hear,
(My work untrimmed), the sunset gun too soon.
—Robert Louis Stevenson.

WE WANT YOUR COOPERATION

One of the features of our coming January number will be a "free for all" symposium on "Sore Throat." We are desirous of getting a general response from our readers, inasmuch as we consider this topic of the utmost importance at this season.

All kinds of sore throat will be discussed—diphtheria, croup, tonsillitis, "quinsy," streptococcic sore throat, acute (or chronic) pharyngitis, acute laryngitis, tuberculous laryngitis, and other forms.

Take up the particular affection in which you have most interest and experience. We want helpful hints regarding treatment as well as suggestions on diagnosis. If you have developed a better method of dosage or of the technic in administration of antitoxin in diphtheria, please tell us about it. If you have found some local application peculiarly efficacious in laryngitis, tell us that. If you know of some simple operation useful in treating tonsillitis, give us that also.

It is hardly necessary to repeat that we want *short*, crisp articles. In order to give everyone of the "family" a chance to be heard, it will be necessary for each to be economical in words. Cut the peroration—omit the "frills"—give us the bare, unadorned *facts*.

Please do not delay sending us your little article. Our January number is to be one of our best, and we need your immediate cooperation to make it so. Need I say that this invitation is for *every* reader of CLINICAL MEDICINE?

God Almighty first planted a garden. And, indeed, it is the purest of human pleasures. It is the greatest refreshment to the spirits of man, without which buildings and palaces are but gross handiworks; and a man shall ever see that when ages grow to civility and elegance, men come to build stately sooner than to garden finely, as if gardening were the greater perfection. —Francis Bacon.

RISING TO THE OCCASION

A medical exchange prints the following abstract from a private letter written by a general practitioner in a manufacturing town some ninety miles from New York:

"My family is big and expenses increase in proportion to age, while my income grows less, from a multitude of causes. Contagious diseases are a rarity; obstetrical cases are tending toward the hospital more and more; district nurses do all the minor work, as well as attending to infant ailments due to feeding indiscretions; specialists are numerous and attract the cream of the cases. If only I had had the courage to strike out into some special line ten years ago, I could, probably, have lightened my burden and shortened my working-hours; but I must go on, the old family doctor, to the end."

In a certain sense, of course, all that this correspondent says is pathetically true, and we keenly appreciate and deeply sympathize with his growing realization that the younger generation is overtaking and distancing him in the race for position and place. That, however, is a state of affairs which is common to every worker, in every line of work, and does not pertain especially to medicine. We venture the assertion that there is no man, in any department of industry, who began work twenty-five or thirty years ago that has not seen the conditions and requirements and scope of that industry undergo vast changes, to which he must energetically adapt himself if he is to keep up with the procession—and, withal, wide-awake and progressive as he may be, he finds himself gradually giving way before the oncoming rush of the younger generation.

In this sense and to this extent, we sympathetically admit the truth and the poignancy of the rather affecting letter quoted; and we recognize, with regret, that, in a profession like medicine, where even at the best emoluments are meagre and there is little chance for laying up a surplus, this natural process of eclipse makes itself felt chiefly in a pinch upon the pocketbook. This effect of the irresistible and relentless march of time and progress upon the individual we regretfully and (for we—the one penning these lines—are fast nearing the line ourselves) wistfully concede. But we can not and will not admit that this same march of evolution and change is putting—or, at least, that it needs to put—the general practitioner, as a class, out of the running.

The modern *zeitgeist* requires a corresponding evolution and change in the practitioner. There is no doubt about that. Any man who imagines that he can go on practicing medicine in the same old way that his grandfather did and who idly or obstinately refuses to align himself with the trend of the times inevitably will find the times passing him by and himself left in the lurch. But he who will take a sensible inventory of the situation and of his own powers and opportunities will just as surely find that there still is an important and remunerative place in medicine for the general practitioner—yes, even for the family doctor—so that, while it may be true that he "must go on, the family doctor to the end," he need not and should not "go on, the *old* family doctor to the end," but may, and should, convert himself into the *new* type of practitioner.

There is neither sense nor necessity in the general practitioner's surrendering to the features and agencies of modern medicine—the hospital, the laboratory, the prophylactic organization, and the like. These are all intended to be the doctor's *handmaids*, not his rivals; if he allows them to develop into rivals, it is largely his own fault. The general practitioner is still in the saddle, until he himself voluntarily dismounts. It is not even necessary for him to have all these modern facilities or to perform, himself, all these modern services. He need not own a hospital or conduct a laboratory or be a specialist. But, he must have, and must exercise, an intelligent appreciation of their values and make a masterful use of them in his practice.

It is useless for the doctor to stand by idly and bewail the hard times, the high cost of living, the march of progress. These conditions he must meet with increased energy and resourcefulness, unless he is to fall hopelessly behind the procession. The very same conditions which impose new exactions also bring with them new opportunities. Remember Tennyson's characterization of the true statesman:

> Who knew the seasons, when to take
> Occasion by the hand and make
> The bounds of freedom wider yet.

He who applies the same broad, wise principle to the practice of medicine will ride triumphantly to success on the wave of progress and of change, instead of being submerged by its irresistible onsweep.

The highest compact that we can make with our friend is this: Let there be truth between us two forevermore. It is sublime to feel and say of another, I need never meet, or speak, or write to him; we need not reinforce ourselves or send tokens of remembrance; I rely on him as on myself; if he did thus or thus, I know it was right.—R. W. Emerson.

PROVIDING AGAINST THE EVIL DAY

In another editorial, we have set forth the complaint of an elderly practitioner of medicine, that the changing conditions, both in the profession and the laity, are leaving the general practitioner in the lurch; and we have tried to show that this is not so, but that the correspondent in question has mistaken an individual problem for a class-problem. It must be admitted, however, that our argument, while it disposes, as we think, of the general aspect of the question raised, does, in that very disposition, open up another problem that at least is deserving of an equally serious attempt at solution. We rather think that it calls even more urgently for attention, since the general problem will take care of itself, while this one will not.

What is to become of the elderly practitioner who has not been able to lay up a competence for his declining years and who at last finds himself unable to keep abreast of the strenuous demands of a general practice?

Well, the correspondent himself furnishes a key to the answer in one of those saddest of all sad reflections upon what might have been. "If only," he writes regretfully, "I had had the courage to strike out into some one line ten years ago, I probably could have lightened my burden and shortened my working-hours."

There, we think, is the solution, and the only practicable solution, of the problem. It again is a question of "preparedness." Nothing is so pitifully pathetic from the onlooker's standpoint, nothing so keenly tragic from the man's own viewpoint as old age unprovided for. And, little as we are accustomed to think so, the most tragic of all is, not the old age of complete helplessness, when one's physical and mental powers fail utterly, so that one must, perforce, submit to be cared for by someone else, but it is the old age of preserved functions and sensibilities, baffled of their desire to express themselves in activity. The old man who *could* work, who feels keenly the sting of uselessness, but who beats the air in an impotent idleness because he has not shaped his course to provide for his limitations—he, of all old men, is the most miserable.

Heaven forbid that any of the readers of CLINICAL MEDICINE should ever come to this state! They shall not, if any friendly admonition of ours can influence them while there yet is time to insure against it.

Of course, it is easy to say that every practitioner ought to lay up a little money against the day of declining years. Unhappily, this is not always practicable or even possible. Still, one can at least make provision against the time of diminished physical powers and bodily limitations by beginning, aforetime, to shape one's work in anticipation of that time. It is not necessary that one undertake to make himself a full-fledged specialist; that is hardly practicable, either. But there are many lines of practice to which the physician may more and more devote himself as time goes on, with a view to making them his modest "specialty" when he no longer can carry the whole burden—simple, congenial branches, such as lend themselves readily to his individual circumstances and capacities.

Thus, for example, the doctor may pay more and more attention to diseases of the nose and throat; he may take up refraction work, devoting himself to that exclusively; he may make a special study of chronic disorders, which do not involve any hurry-calls or emergency demands; in special instances, he may even establish for himself some relationship with the medical or popular press in matters pertaining to medicine or to public health, and thus turn his professional experience to account and profit. Any of these expedients, or any one of several others that may occur to the resourceful man, will furnish a way of providing for the autumn of one's life.

But, whichever course may be chosen, the important thing (and this is what we wish to impress upon all real and prospective candidates for the admonition) is, that it be negotiated beforehand, so that when age begins to creep on apace, and eyes begin to dim a little and physical force to abate. we may not be taken unawares or compelled to reproach ourselves with a regretful "If I only had had the nerve to strike into some one line ten years ago!"

Time is the essence of this contract with the future.

We repeat, nothing of this sort shall happen to any of our readers, if we can do anything to prevent it. Not only shall we persistently urge upon them to look ahead and make provision against the inevitable, but we shall hold ourselves always in readiness to assist them in every possible way in so doing. These pages ever are open for discussion as well as for promotion of ways and means to that end.

We earnestly invite our readers to come to us, both with inquiries and with reports of their own experiences in the matter.

All service ranks the same with God;
If now, as formerly He trod
Paradise, His presence fills
Our earth, each only as God wills
Can work. God's puppets, best and worst,
Are we—there is no last or first
—Robert Browning.

CROUP AND ITS TREATMENT

Some years ago a prominent pharmacist reproached the writer with advocating for all phases of all diseases, under all circumstances, treatment by the use of the alkaloids. This experience provides an excellent illustration of the way people jump at conclusions and then take their own assumptions as the truth. Perhaps no better comprehension of my position may exist in the minds of some of the readers of this journal; and to exemplify the error we will give the history of the use of iodized calcium as a remedy for croup.

This remedy, originally known as the brown iodide of lime, was first introduced by a homeopathist, Prof. Beebe; and was prepared by a Boston firm of manufacturing chemists. For a time it enjoyed some vogue but its use had about died out when it was revived by an article published in *The Alkaloidal Clinic*, by Dr. V. E. Lawrence, of Ottawa, Kansas, which, as a matter of historical as well as therapeutic interest, we reproduced in December, 1914. Immediately following the first appearance of this paper we began to receive letters from doctors asking for further information concerning the remedy. These were followed by many reports on its uses, some disappointing but the great majority confirming Doctor Lawrence's high opinion.

Now the brown iodide of lime is not an alkaloid, or a vegetable product at all; but we have a well-grounded confidence in the great American medical profession, and whenever we find the doctors with anything like unanimity finding a use for any remedy we know it is worth investigating. Here is where our own interest in the "brown iodide of lime" began—not because it fitted into the reforms in therapeutics we were advocating, but because it had been found useful.

The earlier reports upon this remedy praised its action in croup. Many make little distinction between catarrhal and membranous croup, especially those whose medical education is largely derived from bedside studies. The young graduate, fresh from college, may tell us that membranous croup has fever, cough and voice suppressed, and growing difficulty of respiration, and that when this increases until the abdomen is retracted during inspiration it is time to intubate or cut. But the clinician asks, how about catarrhal croups with fever and retraction, but not a trace of membrane discoverable? Clinically we find there is no hard and fast line dividing them, but that cases are found that shade off into each other until we are at a loss how to classify them.

The general view at present makes no difference between membranous croup and diphtheria. The Boards of Health wisely demand that all such must be reported as the latter, for it is better to be on the safe side. But the bacteriologist finds cases where the specific organisms of diphtheria can not be demonstrated, and where none of the constitutional symptoms of diphtheria occur. Our own observations lead us to the belief that there is a membranous croup that presents the highest development of the same inflammatory process that occasions the phenomena of catarrhal croup, and that this may or may not subsequently develop into diphtheria.

This view reconciles many apparent discrepancies of observation. Many assert that calx iodata is effective against all varieties of croup, but some few reports deny its value in true croup. If we assume that these are really diphtheritic the difficulty vanishes.

The earlier this remedy is given in croup the more effective it proves. One-third of a grain should be given in a dessertspoonful of hot water, every ten minutes until the tension relaxes, and the child is relieved. Sleep follows quickly, and the terrified parents are jubilant at finding themselves in possession of a remedy that so speedily quells the threatening symptoms. But if there is reason for believing the case diphtheritic, as when it occurs where that disease is prevailing, or as an extension from tonsillar deposits, it is not likely that much if any benefit can be secured from this drug alone, although it is even then wise to use it.

In dealing with commencing respiratory catarrhs of any description calx iodata has proved one of our most effective remedies. The same doses may be employed as in croup. Many a time we have broken up a beginning coryza by prompt and persistent applications of this drug. However, during the last epidemic of influenza we began to give this remedy in doses of 5 and even 10 grains, in hot water, every half to one hour. Never before have we had such excellent results in the treatment of this baffling malady.

But, one may ask, can patients take such huge doses, with so large a content of iodine, without incurring the evils of iodism? Personally we have never succeeded in inducing iodism with calx iodata, although others have assured me that they had witenssed cases. We are inclined to look upon these as instances of that peculiar idiosyncrasy toward iodic preparations one meets occasionally, when minute doses are followed by furious toxic manifestations. Just why iodism does not readily develop with this drug it is not easy to say.

Doctor Waugh has found calx iodata the quickest and most powerful remedy for pyrosis and the pangs of acidity. It also stops fermentation the moment it reaches the stomach—better than soda in any dose. Even the acidity commonly present in rheumatic fever gives way to calx iodata.

In struma, syphilis, and wherever we wish to obtain the resolvent action of iodine as speedily as possible, calx iodata is a good preparation. In fact, its activity is such that we may employ it when hurry is imperative. In such cases, of course, the doses given should be very large.

I suppose every man who has tried calx iodata and found it affording the activities of iodine has asked himself if it is not merely the latter, and if similar effects may not be secured from the tincture, or from Lugol's solution. I know that I made the trial, but it did not work. Many others have told me the same thing. This loose chemic combination between iodine and lime seems to possess properties not obtainable from other iodic preparations or combinations. The lime is much more than a diluent and exercises an active influence in the system. The fumes from lime once used in croup had something more than watery vapor to account for their value.

The most devout old lady will tell you that in the beginning there was God, and He made the world. The deepest scientist says that in the beginning there was force and matter, and that the force operated on the matter and evolved a universe. Just a difference in names, and yet one shouts "You infidel!" while the other sneers "You idiot!"

IT'S A CHEAP KIND OF WAR THAT BLOWS NOBODY ANY GOOD

The Paris correspondent of *The Boston Medical and Surgical Journal* contributes the following:

"A soldier, Boissay by name, entered the ambulance for a fracture of the left leg and wounds of the right. X-ray examination revealed, in the latter, round bodies that were taken for shrapnel bullets, but that were found on extraction to be *three twenty-franc gold pieces*, or Napoleons, as they are familiarly known. Now, the strange part of the tale is that the patient is a poor man, who had not even a bowing acquaintance with such a *grand seigneur* as a Napoleon! The three coins must, therefore, have been blown out of some comrade's pocket into the wounded man's leg!"

This story should be given wide publicity. It might stimulate enlistments.

CONTROLLING CANCER

It has long been our conviction that the only way to fight the constant increase in the prevalence of cancer is, to study the natural course of the disease and ascertain the factors that make for its incidence. The studies made some years ago in Chicago showed that this malady prevailed among our heterogeneous population in direct ratio with their use of meats, especially of those inferior sorts that, unsalable in their natural forms, might be disposed of when disguised in sausages. This, to our mind, is the most important contribution that has yet been made in the fight against this growing peril.

That there are other considerations not without importance, may be gathered from the report of the health-officer of Portsmouth, England, just published. Doctor Fraser there states that in the year 1913 there occurred in that city 230 deaths from cancer. A campaign of education was then instituted, the main argument in which was as to the wisdom of early operation. By circulars and by newspaper articles, the health-officer endeavored to persuade persons attacked by cancer to seek relief as quickly as possible. The statistics for the past year seem to have justified this procedure, for, in the face of an increasing population, the deaths from cancer in 1914 fell to 197 (from 230). A notable triumph!

For twenty years, the mortality from cancer had been rising, from 6.79 per 10,000 in 1893, to 9.16 in 1913; in which latter year the deaths from cancer were only 34 less than those credited even to tuberculosis. A Portsmouth surgeon, Doctor Childe, initiated the movement by the publication of his book, in 1906, on "The Control of the Scourge." The health-office began, in 1913, the monthly publication of articles in the journals, circulars, lectures to midwives, nurses, and social workers, and free microscopic examinations, in suspected cases, for those who were unable to pay for such service.

The fact was observed that cancer-patients presented themselves for treatment when the malady had progressed too far for successful operation. This was not attributed to fear of operation, but to ignorance of the true nature of the disease, since cancer is not a painful affection in its early stages. The realization of this truth was the first step in the education of the public to the point of taking measures for their own safety.

Vastly important as is this matter, in so far as the early treatment of cancer goes, it is far more so as furnishing material for the advocacy of a far more vital reform. Cancer is not the only disease in which early recognition leads to life-saving treatment, nor is the surgeon alone or even principally concerned. How about tuberculosis, nephritis, organic diseases of the heart, liver, lungs, digestive apparatus, nervous system? It is the internist who is principally concerned; and it is that radical departure from medieval methods and adoption of measures suited to the present day, which we have so often advocated, that is demanded, namely, the abandonment of the fee-system and the substitution of the annual compensation for the personal and family medical adviser. The latter becomes the sanitarian, whose duty it is to prevent disease, by recognizing its causes and removing them; who, by his regular life-insurance examinations, detects the first beginnings of the disease and by timely treatment dissipates the gathering dangers. We all admit:

That preventive medicine is the right and proper thing;

That it is best to detect disease at the earliest possible moment, and that it is most successfully treated then;

That the way to do this is, to make periodic examinations of our patients, without waiting for illness to appear;

That the annual-compensation method has innumerable advantages both for the physician and the patient.

Well, since you admit this, why don't you do it?

The enormous influence of spiritual environment, of friendship, of happiness, of beauty, of success, of religion, is greviously, ludicrously underestimated by most physicians, nurses and hospital attendants. There are diseases that cannot be cured without friendship, patients that never will get well unless you can get them to make a success of something, or to conquer their own self-absorption by a self-devotion, losing their life to find it. —Richard C. Cabot.

YOUR OFFICE-EQUIPMENT

The other day I looked in on the "clinic" of one of the large dental-supply firms. This clinic was not, as with us, the presentation of a ghastly array of unusual "cases," with a distinguished surgeon in the foreground, lifting up his blood-stained scalpel and his illustrious countenance for the plaudits of the professional *hoi polloi*. No, in this clinic, I saw no patients at all, and the only dentists in sight were gathered around skilled workmen and technical experts who were explaining the mechanism of the latest dental appliances.

I learned how artificial teeth are made, how they are anchored in the mouth, and how the different alloys are prepared. I was shown the progress achieved in the filling of teeth, the latest improvements in the dental engine, the application of the x-ray to dentistry, the new methods as well as the new instruments employed in treating pyorrhea, improved apparatus for illumination, was instructed in the art of plate-making, and was given more really practical pointers about anesthesia in half an hour than I have picked up from my exchanges during the last six months.

When I had finished with this inspection. I began to understand why American dentistry is the best in the world. And this is the reason: dentists appreciate and utilize the work of their supply-houses; and, as a result, these concerns are enabled to do the dental profession a service of simply incalculable value.

"But dentistry is largely mechanical," you respond?

To be sure, it is that—but so is medicine. Given a good professional groundwork, and you can safely say that that doctor is most likely to succeed who has the best tools and knows how best to use them.

That should be an axiom, requiring no demonstration. Drugs are tools, and should be looked upon as such; and the doctor should demand that they be good. Skill—though not strictly mechanical skill—is required in making them; and this should be appreciated and rewarded by the profession.

Pure mechanics, also, is an indispensable part of the *art* of medicine, and it is becoming more and more indispensable. The time is coming, and soon, when an understanding of the microscope will be an absolute necessity for the man who wants to be thoroughly competent. Also, look at the development of blood-pressure apparatus within recent years; who would think of trying to diagnose cardio-renal disease without this? Consider all the array of *tools* now required in arriving at the diagnosis of even the most ordinary disease.

In therapeutics, mechanics is becoming even more important. Just think of the different things the general practitioner can use to fit up his office for better work, as, for example: examining tables and chairs, hot-air apparatus, electric-light baths, x-ray machines, electrotherapeutic outfits, lenses for visual tests, apparatus for the examination of blood and of urine and other secretions, specula, pessaries, anesthesia-apparatus, transfusion-apparatus, intubation sets, and surgical instruments of all kinds; not forgetting a sterilizing-outfit, splints for the treatment of fractures—besides many, many other things. How many of these do *you* own? How many of them do you understand?

Medicine not mechanical, you say? It is, brother, and it is becoming more and more so every day that we live. And I will add that those of you who grasp this fact earliest, other things being equal, will be the quickest to succeed professionally.

Now, here is heresy for you: If you feel that you can not afford both, it would pay you far better to spend your money in making an intimate acquaintance with the tool-makers of your profession than in attending the annual medical-society meetings. And I am going to make that term "tool" broad enough so as to include everything a doctor possibly can utilize in diagnosing or treating disease.

Knowledge is essential to success, but skill is equally essential—and what is skill without tools? What would you think of a carpenter who took the job of building your house with only a hand-saw and a hammer? You wouldn't think much of him, even if he could discourse to you in the most approved fashion about the science of house-building, would you? Yet, how many doctors there are whose tool-kits—meaning their offices—are as bare and empty and as poorly equipped as is that of a dark-skinned craftsman in the heart of blackest Africa!

Honestly, I do wonder how some doctors can even *hope* to succeed.

The very best investment any physician can make is in his professional equipment. It will pay far heavier dividends than money put into stocks, bonds, mortgages or real estate—better even than the war-stocks! It's a poor kind of doctor who cannot make 1000 percent on the money invested in office-apparatus, *provided he learns how to use them, and does put them to use.*

Compare your office-equipment with that of your dental brother across the hall. Does the comparison make you proud? He, the dentist, has every tool he can find use for—and he knows how to use every one of them. You have a few drugs, a urine-test set, a few instruments—perhaps an old static machine that you never understood and is useless today. The dentist keeps his office clean and attractive; he has to, or, he would lose his business. You have a dirty, rickety roll-top desk that is covered with dust and littered and piled high with unread journals. There is no rug on the waiting-room floor. And, you wonder why your patients drift away!

Why not turn over a new leaf? Why not begin to study professional equipment, with a view to enlarging your field and increasing your practice? I tell you, it can be done, and the field will be found as vitally interesting as anything in medicine.

What can we do, through CLINICAL MEDICINE, to help you in this matter? Please tell us, those of you who are searching for help. Perhaps those of you who already have entered the better way will "come across" with help. We want a good article, or several

such articles, on "The General Practitioner's Equipment." Who will write it or them?

So has it been from the beginning; so will it be to the end. Generation after generation takes to itself the Form of a Body, and forth-issuing from Cimmerian Night, on heaven's mission appears. What Force and Fire is in each, he expends; one grinding in the mill of Industry; one, hunter-like, climbing the giddy Alpine heights of Science; one madly dashed in pieces on the rocks of Strife, in war with his fellows; and then the Heaven-sent is recalled, his earthly Vesture falls away, and soon even to sense becomes a Vanished Shadow. —Carlyle.

THE DOCTOR'S INFLUENCE

Mr. Deweese, the Advertising Manager of "Shredded Wheat," in a recent conversation with the advertising manager of this journal, made the statement that he "would not give ten cents for the influence of all the doctors in the country" in the endorsement and recommendation of the class of product which his company manufactured.

It is hard to believe that any experienced and presumably far-sighted business man, in possession of his senses, could deliberately give utterance to such an astounding expression of opinion. It simply goes to show that the keenest men frequently have a blind side to their mental vision; for Mr. Deweese has but to bestow the most cursory glance over the terrain which he thus contemptuously dismisses from his consideration to see that the facts are overwhelmingly in contradiction of his hastily expressed judgment. If there is one thing in the realm of practical sociology which has established itself, firmly and conspicuously, in the last twenty years, it is the enormous influence exercised by medical science and the medical man upon the thought and conduct of civilized communities.

Indeed, it is scarcely too much to say that the influence of medical science, exercised and administered through the medical profession, has, within the period mentioned, completely revolutionized public sentiment and public conduct. And it certainly is no exaggeration to assert that no one class of men has wielded, and still wields, the degree of influence exerted by the doctor. This ramifies into every phase of individual life, and reaches every department of organized activity. So potent and wide-spread is it, in fact, that some question whether it has not become *too* obtrusive. But when we inquire carefully and without prejudice into the causes of its growth, we find that it derives its authoritative weight from the natural and wholesome sources which beget genuine authority.

To begin with, the general public—even the better-informed part of the public—is profoundly ignorant of hygiene and sanitation, with all that pertain thereto. In the last twenty-five years, however, these topics have become of first importance, and under the influence of modern enlightenment, the public has come to the point spoken of in the famous Oriental proverb, where they "know not, and know that they know not."

The doctor stands at the complementary pole. He "knows, and knows that he knows." Moreover, the public knows that he knows, and looks to him for information and instruction. It has faith in his knowledge—a faith that has been justified by years of vindication, as well as by the constantly increasing thoroughness of the doctor's training.

In the second place, this very condition of helpless ignorance on the part of the public in such matters puts it at the mercy of pretenders, fakers, and interested schemers with commercial axes to grind, and it seeks a guide who not only *knows* the truth, but who will proclaim it in fearless, impartial fashion. Such a guide he finds in the doctor. Sneer as you will—be as cynical as you please—the fact remains that, with all his faults (and nobody pretends that he is without his faults), the doctor, as a rule, is honest. He is concerned only with the welfare of his patients and the health of the community. There is, in fact, something innate in the relations which the physician assumes to his clientele, and toward the public at large, that imposes on him a sense of *noblesse oblige*, to which, to his credit be it said, he has splendidly lived up. The public knows this. It has faith, not only in the doctor's knowledge, but in his probity and sincerity—a faith, again, which years of experience have justified and entrenched.

We repeat, there is no one man in all of our organized civilization who exercises the degree and extent of influence over the public mode and materials of living, at the present day, that the doctor does; whose lightest word is law in matters of health and hygiene; whose least suggestion in eating, drinking, sleeping, and what-not assumes so much the force of an edict; and whose endorsement or disapproval of a product or a procedure makes it or damns it in the eyes of those to whom he holds the position of adviser. Let the doctor go out of his way to specify a particular product, and the client will walk all over the city, if need be, to get that particular thing. Let the doctor condemn some special article, and, though the negative process may be a

little slower than the positive, it is none the less sure—that brand will ultimately disappear from the homes in which the doctor has his advisory capacity.

There are, we believe, some 125,000 doctors in the United States. The exact number, however, or even the approximate number, is unimportant. The significant thing is that the medical profession, whatever its numerical strength, is so distributed as to cover (and in many instances overlap) the entire population. This means that, of all the millions of people to whom the manufacturers of this or that product look as potential customers, *there is practically not one that is not directly within the purview of some doctor's influence.*

In view of these indisputable facts, we say again, we cannot understand how any intelligent business-man can repudiate the influence of the doctor in the promotion or otherwise of any product which bases its claims to patronage upon an appeal to principles of health or hygiene. To which argument, *a priori*, may be added the argument *de facto*, that many and many an article of food and drink and apparel *has* been made and damned by this very influence which Mr. Deweese professes to despise. It is a very real influence and a very legitimate one, not, of course, to be used in special interests or as a weapon of blackmail, for just as soon as the doctor should begin to use it in this way his influence would lose the very force which it derives from its sincerity and honesty; but it is one to be wielded fearlessly and impartially for the benefit of humanity and the maintenance of high standards of living.

Wrapped in his sad-colored cloak, the Day, like a Puritan, standeth,
Stern in the joyless fields, rebuking the lingering color—
Dying hectic of leaves and the chilly blue of the asters—
Hearing, perchance, the croak of a crow in the desolate tree-top.

—Bayard Taylor.

BIOLOGIC MEDICINE

"Sooner or later you will be compelled to consider the claims of biologic medicine."

That may have been true when first written; it is untrue now. Today, there is no "or later" to the matter; it is now, just now, that you must consider biologic medicine, if you mean to continue on the list of practicing physicians.

This truth was borne strongly upon us in reading the records of a recent discussion anent the treatment of diphtheria. There were three parties to it, one advocating maximum; the second, medium; the third, minimum doses of antitoxin. That was absolutely all. We looked in vain for those who would speak of the value of local cleansing and antiseptics, of checking the deadly nasal hemorrhage, of constitutional support, of the hygienic conditions of the premises of nutrition; but not a solitary word was spoken, except, and only, concerning antitoxin.

Yet, still facts are facts, that bad hygienic conditions of and about a house tend to the production of diphtheria; and that thorough cleansing away of the secretions from the nostrils and other affected parts, and stopping the absorption of poisonous material from the dead and dying tissues and decomposing membranes works an improvement in the condition of the patient as sudden and decided as ever followed an effective dose of antitoxin.

Early in the preceding century, a Doctor Greenleaf proffered a formula, consisting of potassium chlorate and hydrochloric acid, to which were added, as the chlorine evolved, water and tincture of iron. This seemed to work wonders, except in these malignant forms where all medication failed. But, in these terrible cases, an improvement that seemed, and was, marvelous followed when the decomposing secretions were removed and local antiseptics applied to the affected mucous tracts. Still some of them died. Then the next step was, to search out the sources of malignancy in the defective hygienic conditions of the residence and its surroundings and to remedy these. The sudden change from malignancy to ordinary and controllable forms was one of the lessons so deeply impressed upon our consciousness that many years of subsequent experiences and the development of newer methods have not weakened. The value of good hygienic conditions is as great and as true as it ever was.

Every practician has had similar experiences. Trying out carefully every newly devised method that offered itself, seeking the means of controlling one phase after another of the dangerous malady, we surely advanced in our means of coping with diphtheria. Suddenly antitoxin was sprung upon us—and, as its tremendous powers for good were developed, the dosage and administration perfected, we dropped everything we had previously known and used and devoted ourselves with enthusiasm to this marvelous discovery of Behring. Yet (enthusiasm is good, but the editor must be careful and keep

cool), tell us whether there be not an occasional life lost with the use of antitoxin, that might have been saved by the application of some of this old, now forgotten, lore? Are there cases where antitoxin comes in too late? Do no children nowadays have nasal hemorrhage that kills, where solutions of chromic acid would have stopped the bleeding as of yore? Is the breathing of pure air no longer necessary? Does a cesspool whose wall leaks fecal matter into the cellar no longer afford a peril of malignancy?

If antitoxin renders hygiene unnecessary, it is, indeed, a miracle.

Very well; if this ancient practice be, indeed, obsolete, let us suggest that in the cause of prophylaxis the connection between bad sanitary conditions and the development of malignancy be not forgotten. Even here, however, the antitoxin-advocate is ready with his immunizing doses—we may eat dirt, drink dirt, breathe dirt, live in and on dirt, if we only squirt an occasional dose into our beings.

Perhaps the strangest thing about this antitoxin matter is, that it has not as yet developed the antiantitoxinist, with the very decided and peculiar traits characterizing the antivaccinationist. . Why is this? The latter personage generally is ready to give antitoxin a sideswipe as he passes by, but he has not shown toward it the venom, the malignancy, the energy, the active and devoted antagonism that he manifests toward variola vaccine. The word anaphylaxis never drops from his lips. He has not discovered that the puncture of the antitoxin-syringe leaves the mark of the beast mentioned in Revelation. He has not conjured out of statistics the astounding facts that antitoxin is the true cause of diphtheria, besides transmitting everything that can ail mankind, from corns to mothers-in-law. He has not yet so much as suspected the true source of every disease and accident that may affect a person once treated for diphtheria to be the serum used. He has not traced the connection between the sales of antitoxin and the number of diphtheria cases, and paraded this triumphantly as proving the former to have been the cause of the latter. In fact, he has not availed himself of this opportunity to show himself what Artemas Ward termed his pet kangaroo, an "amoosin' little cuss."

For a century, vaccine stood unsupported. Then it was joined by antitoxin. Many relatives have contended for a seat by these mighties, and the typhoid immunizing serum, for one, has proved its right. With the antitetanus antitoxin, it has been more difficult. While many persons subjected to wounds that might have developed this dreadful malady have taken the antitoxin and have not developed the disease, this does not prove conclusively that the remedy prevented it; for, but a very small portion of persons thus wounded ever contract tetanus.

It is a significant fact, though, that those who have had exceptional opportunities for studying wounds and their effects, including tetanus, are most urgent in the advocacy of this antitoxin. We refer here especially to men such as Dr. W. C. Iuen, for many years surgeon to the street-railways of Kansas City. In this latter capacity, he has treated many cases of injury, and his practice now is, to inject immunizing doses of tetanus antitoxin in every case where this malady could possibly develop. To our objections, he replied: "If you have ever had one solitary case of tetanus to treat, you will not neglect this preventive. One is enough."

We agree unreservedly—one case of tetanus to treat and to watch is an ample experience for this writer.

As to the other serums, vaccines, antitoxins, bacterins, opsonins, *et id omne genus*—they all fall into the same category—they are perhaps not fully established; still, the evidence in their favor is so strong that we have no right to forbid our patients the possible and probable benefits from their application. We should assist in the development of this most promising department of therapeutics, by utilizing these whenever we see there is a reasonable chance of their proving of value. We need not forget or neglect the valuable means and methods gathered in our past professional life, but we must not fail to utilize to the full limit the newer methods, when they are so full of promise as these.

Especially is this true for the bacterins for pneumonia. We can ill afford to lose any possibilities toward the successful management of this malady. The thyroid extracts also are worthy of the most thorough and careful applications.

But, what are all your uses worth, if you do not report them for the profession at large? Successes, failures, limitations, and extensions, all should go as contributions to that composite picture, which, coming from many cases handled by many doctors, under many different conditions, affords a curiously varied and modified, yet unified, picture that is nearer the truth than any one of its components.

Leading Articles

The Etiology and Treatment of Pneumonia

A Review of Some Important Recent Work

By J. Favil Biehn, M. D., Chicago, Illinois

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PNEUMONIA was one of the first definitely recognized infectious diseases. It was accurately described by Hippocrates, who suggested bleeding, that is, venesection, as the ideal treatment. Until within the past ten or twelve years, it has been second to tuberculosis as the chief cause of death. Since then, however, the number of deaths from pneumonia has gradually increased over the number of deaths from tuberculosis.

In the year 1914, pneumonia caused approximately 12 percent of all deaths reported in Chicago. The late Dr. Frank W. Reilly, assistant commissioner of health of Chicago, very aptly called it the "captain of the men of death." While it is of more frequent occurrence in cities, especially in crowded localities, it is fairly common even in the sparsely settled rural districts. Approximately 70 percent of those attacked are males. No age is immune. Consequently, it is one of the infectious diseases of greatest interest to the physician, if not most important of all.

Within the past year, some very notable facts have been elicited as the result of research-work concerning this disease; so that now we appear to be on the threshold of a treatment that will be definitely valuable; in fact, practically specific.

It was formerly considered that pneumonia is not highly contagious, but that, inasmuch as 60 percent of all persons harbor pneumococci in their respiratory mucous membranes, some secondary factor—for instance, exposure or a combination of exposure and the presence of some toxic substance (alcohol, and the like) especially in those suffering from renal disease, resulted in an attack of pneumonia; the exposure and other coincident factors reducing the vitality to such an extent as to enable the pneumococci successfully to invade the blood stream or the alveoli of the lung.

However, recent researches by Doctor Schottmueller (1903) and Professor Neufeld in Germany, Lister in South Africa, Dochez and Avery in New York, Walker in Boston, and Lewis in Philadelphia have demonstrated that pneumonia is an autogenous infection in not more than 20 or 30 percent of all cases. These 20 to 30 percent of cases are brought on by a heterogeneous group of pneumococci, the socalled "group IV." The several species bear practically no relation to each other, so far as their immunological reactions are concerned; and but very few deaths occur from attacks caused by this fourth group.

The other 70 to 80 percent of cases of pneumonia have been proven to be the result of direct contact either with one actively sick or a carrier, and are caused by three well-defined groups of pneumococci; type I and type II being recognizable and differentiable by their immunological reactions, and type III consisting of the pneumococcus mucosus.

It has been definitely proved that the cases produced by these three groups are the ones in which the greatest number of deaths occur. It would seem also that these three groups of pneumococci are definitely parasitic in their nature, in contradistinction to those of group IV, which are more or less saprophytic and capable of producing pneumonia only under special circumstances; nor do they tend to produce the disease in a second individual, whereas the parasitic pneumococci of groups I, II, and III constantly tend to produce pneumonia in any susceptible individual who may come in contact with someone either suffering from the disease or convalescent, or with a healthy carrier who has come in contact with such a person.

These three groups of pneumococci are definitely parasitic in their nature. They are never found in the throat, except in one suffering from the disease or one who has

been in direct contact with such person. They do not persist in the throat after the patient's recovery from the disease (so far as it is at present known) for more than ninety days—sometimes not longer than ten. In other words, when one recovers from the disease that has been produced by either of the members of the first three groups, these pneumococci tend to disappear rapidly from the throat and are replaced by some of the saprophytic pneumococci belonging to group IV.

The Pulmonary Alveoli Must Be Attacked Directly

The experimental production of pneumonia in animals has brought forth a number of interesting points, especially the work done by Kline and Winternitz, who have found that, in order to produce pneumonia, it is necessary in a normal rabbit to introduce the pneumococci into the alveoli of the lung. Massive inoculations into the trachea alone do not produce characteristic or marked changes in the lung-tissue. It is evident from this that there is some mechanism in the upper air-passages tending to protect the lungs against infection. This is to a certain extent confirmed by the fact that pneumonia can be produced by tracheal inoculation if both vagi are severed in practically every instance; or it may even occur spontaneously under such conditions. If but one of the vagi is severed, only a portion of the otherwise normal animals succumb to the disease. Secondary factors, however, such as exposure to cold, irritating gases, and other toxic elements oftentimes are sufficient to aid in the production of the disease, by overcoming this protective mechanism.

Antipneumococcus-Serum

A highly efficacious antipneumococcus-serum can be produced both for type I and type II of pneumococci. This serum can also be concentrated; that is to say, a globulin-solution can be prepared in which the antibodies from a large amount of the hyperimmunized serum, as removed from the animal, are represented, in solution, in a small volume. It would seem, therefore, that it were clinically possible to combat successfully pneumonia resulting from type I or type II pneumococci, by injecting large amounts of the corresponding immune-serum. Animal-experiments have demonstrated that unquestionably this is possible, at least during the earlier stages of the disease.

Type III—the pneumococcus mucosus—is a very peculiar organism, in that it possesses an exceptionally large capsule and ordinarily is highly virulent. No efficient serum has, as yet, been produced that is capable of passively immunizing an animal against infection by this organism. However, active immunization can readily be effected against the highly virulent pneumococcus mucosus, as well as against group I and also group II, in fact, it is possible to produce a higher grade of immunity against these three virulent groups than can be secured against any one of the members of group IV, the heterogeneous group of saprophytic pneumococci.

Mode of Action of the Serum

Some interesting observations as to the mechanism of recovery as a result of serum-treatment in animals have recently been reported by Kline and Winternitz, especially regarding the part the leukocytes play in the immunity reaction. These experimenters have found that the injection of a fatal dose of pneumococci produces a steadily increasing number of pneumococci in the blood, which reaches its maximum at the time of the death of the animal, whereas at the same time there takes place a marked and steady fall in the number of the leukocytes. When they injected the animal with a pneumococcus-serum, that is, passively immunized it, and then injected a lethal dose of the corresponding pneumococci, they found, so far as they were able to determine, that the pneumococci disappeared from the peripheral blood in from one-half to three hours. At the same time, a decided leukocytosis is produced following the injection of these pneumococci. This leukocytosis reaches its minimum twelve to fifteen hours after the injection of the organisms, which is some hours after the pneumococci have disappeared.

They further found that, when, after actively immunizing rabbits by means of a pneumococcus-bacterin, they inject these rabbits with a fatal dose of pneumococci, the pneumococci also disappear rapidly, while a leukocytosis is also produced; the result being the same, whether the animals be actively or passively immunized. In each case, the animals that have been efficiently immunized recover; the pneumococci rapidly disappear from the peripheral blood stream and do not reappear.

However, if the rabbits are rendered aplastic, that is, their leukocytes are reduced to 1000 or less per mm. by an injection of benzol, an entirely different result is obtained. In such aplastic animals, passively immunized by the serum and then injected with a fatal

dose of pneumococci, the authors found as follows:

The pneumococci disappear from the peripheral blood stream in from two to four hours—but, the pneumococci again reappear in the blood very soon afterward, and increase in numbers until the animal dies, which eventually happens. No increase in the number of leukocytes takes place.

In aplastic animals that have been actively immunized and then injected with pneumococci, the authors found that the pneumococci disappear, and again no leukocytosis occurs; but the animals recover. Evidently, in the actively immunized animals, some other mechanism has entered, one that prevents the secondary increase of pneumococci and the death of the animal.

The authors conclude that the result of the intravenous injection of pneumococci in immunized rabbits can be divided into two stages—immediate and ultimate. The immediate reaction is not decisive of the ultimate result.

The Three Factors Conditioning Immunity

Immunity seems to depend upon three factors: Immune bodies, white blood-cells, and a third factor, dependent for its existence upon the white blood-cells. This third factor may be removed by reinjecting the animal with what primarily would constitute a fatal dose of pneumococci after it has recovered from this fatal dose; the animal having first been rendered aplastic by means of benzol injections, then having received a fatal dose of pneumococci from which it recovers; but it does not recover from a *second* fatal injection.

Immune bodies cause an immediate disappearance of the pneumococci from the circulation.

The third factor causes the permanent absence of the organisms, this resulting in the recovery of the animal.

The white blood-cells seem to be essential for the production of this third factor.

In actively immunizing animals by injecting antigens (in this case, the injection of the pneumococcus-bacterin), a considerable leukocytosis is always produced. We should expect, therefore, that such an injection, since it increases the leukocytes, would also augment this third essential factor; and we have definite proof that it also stimulates the production of immune-bodies.

Aside from the attempts of specific medication in pneumonia, by means of sera and bacterins, there has been promise of success along chemotherapeutic lines.

Chemotherapy of Pneumonia: Optochin

Morgenroth, who had some experience in association with Ehrlich and worked along collateral lines, having knowledge of the somewhat bactericidal action of quinine upon pneumococci, experimented with a number of quinine derivatives, and he finally found that ethylhydrocupreine (optochin base) exerts a definite bactericidal and antitoxic effect upon pneumococci.

This action seems to be a highly selective one; for, it is without bactericidal effect upon other microorganisms, with the possible exception of a very slight one upon streptococci—but only very slightly so as compared with what it has upon pneumococci. It is germicidal for pneumococci in the tube, in the proportion of 1 : 100,000,000. Ethylhydrocupreine, further, is an efficient local anesthetic. Originally it was employed by Kaufmann in the treatment of ophthalmic pneumococcus-infections.

By means of this chemical, we are able, in most instances, to protect mice against many thousand times the fatal dose of pneumococci, irrespective to what group these may belong; and, if introduced shortly after the inoculation of a virulent pneumococcus, many of these animals are saved. However, this preparation is somewhat toxic in large doses, and has caused temporary blindness in a number of instances. The bactericidal effect of the serum, after the administration of ethylhydrocupreine, is manifest in one hour, but is lost three hours later, so that its action is transitory.

While this is the only drug that has been proven by laboratory- and animal-experiments to be directly antagonistic to pneumococci, the reports of its clinical application in the treatment of pneumonia until recently were anything but favorable. However, Moore, of the Rockefeller Institute, in a recent paper has shown that a single small dose of ethylhydrocupreine, which in itself has practically no protective effect against experimental pneumococcal infection in mice, is capable of increasing the threshold value of the homologous type pneumococcus-serum at least fifty times; and this effect is proportionately many times greater than the simple summation of the protective effects of these two substances combined. The effect, however, is obtainable only when the homologous serum of that particular group of pneumococcus is used.

If we have laboratory facilities at hand whereby we are enabled to determine exactly what type of pneumococcus is causing the infection, the matter, of course, will be greatly simplified. If we have an infection caused by type I or type II pneumococcus, the ideal treatment would be to administer the homologous serum together with a small dose of ethylhydrocupreine. If, however, the infection is one with type III—the pneumococcus mucosus—it would be necessary to inject a stock bacterin of this organism, since at present it is impossible to produce an efficient serum. The type of the disease caused by this pneumococcus mucosus will, necessarily, give us the largest number of fatalities, owing to the high degree of its virulence and the fact that pneumonia usually is of brief duration; the patients frequently succumbing before active immunization can be accomplished as a result of bacterination.

In infections caused by one of the organisms of the heterogeneous group, type IV, specific treatment necessarily must be limited to the use of an autogenous bacterin; for, it is impossible to produce a serum in sufficient time, unless the disease should become chronic—a rare occurrence in infections produced by this group. A stock bacterin probably would be of questionable value, owing to the heterogeneous character of these strains. Still, in this group, we have the lowest percentage of deaths; in fact, practically no deaths occur.

Until such time as an accurate diagnosis of the group-type of infection in pneumonia can be made, we are justified in instituting the following combination of treatment: Sera type I and type II with ethylhydrocupreine and, in addition, a stock pneumococcus-mucosus bacterin. This would include specific treatment for 80 percent of all patients; the other 20 percent—those cases owing to type-IV infection, the heterogeneous group—would require the preparation of an autogenous bacterin. But, as this can be made in from eighteen to twenty-four hours, while, moreover, these cases only very rarely prove fatal, there is ample time for such a procedure.

If in the future clinical tests definitely demonstrate the value of the combined use of ethylhydrocupreine and the homologous anti-pneumococcus-serum, it will be necessary for biologic manufacturers to produce anti-pneumococcus-serum, type I and II pneumococci. It will also be necessary for them to prepare a stock pneumococcus-mucosus bacterin. At present these sera do not seem to be commercially available.

In view of these recent researches, the prevention of pneumonia must take into consideration more careful isolation, or quarantine, and the discovery of carriers.

Prophylactic immunization is also possible by the use of type I, type II, and type III pneumococci. Repeated injections of a bacterin containing these three types would unquestionably immunize the patient against the fatal types of pneumonia, and the prophylactic use of such a bacterin is of unquestionably greater value and will produce much greater results than the use of typhoid-prophylactic against typhoid fever, since we can produce an equally efficient immunity, while the incidence of the disease is several hundredfold that of typhoid fever.

Functional Disorders of the Liver

Suggestions as to Their Treatment

By Beverley Robinson, M. D., New York City

IN THE old textbooks on the practice of medicine, the subject embraced in the title was considered at some length and with due appreciation of its importance. In more than one treatise, today, of latest publication and widely used by students, these disturbances are slurred over or not mentioned at all. To me, this is a great mistake, and simply for the reason that very frequently we are called upon to treat these troubles, and, if we do so effectively, we add to our reputation and are of great service to our patients, not only in curing the symptoms from which they suffer, but also in preventing the development of diseases such as gallstones or hemorrhoids, which inevitably will follow if acute bilious attacks are frequently repeated.

Anatomically, an acute liver derangement means congestion of this organ. So far as local signs go, there may be a little enlargement and tenderness shown by percussion. In addition, there may be a sensation of malaise, a weight, with discomfort, in the

hepatic region. To palpation, the liver may be somewhat harder than normal, due, no doubt, to the excess of blood it contains.

As to the subjective symptoms, they are: bad taste in the mouth, foul breath, coated tongue, inappetence or nausea, headache, unwillingness to work or play, constipation, dyspeptic symptoms—such as flatus, weight and distress in the region of the stomach after eating. Often there is frequent expectoration of mucus, thick and slimy. The pharynx is red and relaxed and shows the follicles prominently interspersed with small varicose, tortuous veins. Of course, these latter signs are more marked with every renewed attack—just as the liver grows harder and less yielding to moderate pressure.

In some instances, while acute attacks occur from time to time, the patient also, during the intervals, shows signs of disorder of the liver. Frequently he is a person of spare habit, his skin is dry and has an earthy hue, which might be confounded, by a careless or inexperienced observer, with jaundice. This must be guarded against, for, the sclerotics are not yellow and the stools, instead of being light in hue and pasty, are likely to be overcharged with bile and be of a dark-brown color. The urine often is loaded with urates, but does not show the coloring matter of bile. A constipated habit is the rule and headache and lassitude are not uncommon. Men of this type, even when young, do not bear mental strain well and get easily upset in body, if they are at all irregular as to meals or sleep. Tobacco and alcoholic drinks are inimical to them and must be used very sparingly. When this condition has persisted for several years, these patients are liable to suffer from hemorrhoids, and bleeding from them may recur periodically, and sometimes to such a degree even that it causes anxiety unless an operation be performed to relieve or cure the trouble.

The Chemical Tests Unreliable

Within recent years, different chemical tests have been employed to decide when congestion of the liver is chronic and to what extent organic changes have taken place. With few or no exceptions, these tests are uncertain, difficult to execute, and, in my judgment, of little practical value. It is well, therefore, to adjudicate some seeming advances, because in this way much trouble is saved to the searcher for truth who also is kept very busy making a livelihood.

In many cases of liver impairment, the flow of bile is in excess; in other, fewer, instances, it is deficient in quantity. The instances of the first kind are met with among the corpulent, the heavy eaters, the lazy and self-indulgent. The others we are likely to encounter among the free users of alcohol. At times, the quantity of bile seemingly is not increased, but its quality undoubtedly is changed for the worse. The secondary ill-effect of this vitiation of the bile is manifested in the morbid symptoms produced, which notably are those I already have mentioned in one form or another.

One kind of functional disorder occasionally is met with which appears to be due to primary anemia of the liver rather than to congestion. It is found, usually, among young women who are pale, anemic, and poorly nourished, and frequently is only a part of the general condition, and, I believe, caused by it.

Again, it would seem as if the liver itself were primarily affected, and was the essential cause of the lowered general condition. These cases are rare, relatively, and difficult to diagnose. When, however the ordinary tonics of iron and quinine have failed to cause improvement, we should think of the possibility alluded to; and here a mild laxative treatment will produce better results at first, while later a mineral acid, with a simple bitter, may prove to be a happy selection and to promote rapid improvement in the patient's condition.

A neglected or unwise treatment in the beginning of liver disorder may lead to chronic congestion, and this, again, to organic changes of structure, which ultimately may become one of marked cirrhosis.

Catarrhal jaundice does occasionally occur where the bile-ducts have become thoroughly clogged, by reason of the mucous thickening, acute or chronic, which proceeds directly from the liver, or, indeed, is the outcome of some previous stomachal upset.

In an analogous way, many of these patients are sufferers from piles, either blind and external or else internal, these hemorrhoids giving annoying weight to the rectum or causing not a little bleeding, periodically.

To treat these conditions successfully, may be simple and rapid; and, again, it is long-continued treatment alone that will bring success, provided it is pursued intelligently.

Treatment of Bilious Attacks

As a rule, in an acute bilious attack, I have had best results from prescribing 3 grains of blue pill at bedtime, followed by a laxative saline in the morning. In some instances, in which blue mass purges too

much, it is preferable to give granular effervescent phosphate of sodium, in teaspoon- or dessertspoonful doses in half a tumbler of water, three or four times in twenty-four hours. Celestine Vichy water, drunk freely, is the best mineral water to advise.

There is little doubt that the sodium salts tend to liquefy the bile and thus, when it is too concentrated, to promote a cure. To some observers, the use of a mercurial of any kind is a mistake at the beginning of an acute attack of liver disorder, as it urges the affected organ too much, while a little later it may be very desirable. This is not my experience. After a day or two, especially if there is constipation, podophyllin in small, repeated doses in tablet form should be given. I have found podophyllin tablets of 1-20 grain, two to be taken after each meal, very useful in bringing the liver back to a normal condition. The podophyllin may, also, be combined with the extracts of cascara and belladonna; in this manner, we can regulate the bowels in a very satisfactory way. The alkaline treatment with phosphate of sodium and Vichy water should not be persisted in for too long a time, because of its tendency to thin the blood. In its place, a mineral acid, that is, the hydrochloric or the nitromuriatic, should be given, either with or without a bitter infusion—that of gentian being the best.

In some cases of anemic girls, and after the liver and bowels are again doing their work normally, a mild preparation of iron should be tried for a while; if the effects are good, it may be persisted in for several weeks, except during the menstrual periods. If, however, the effects seem prejudicial, the chalybiate should be abandoned.

If these cases of functional liver disorder are obstinate, and especially when the patient is no longer very young, spa-treatment at Aix-les-Bains, Carlsbad or Homburg, abroad, or at Saratoga in this country often is of great service in helping to prevent hemorrhoidal outbreaks and also in warding off gallstones. This is especially true in instances where the liver disorder is, to a certain degree at least, dependent upon an underlying gouty dyscrasia. Not infrequently, at times, some other manifestation of gout may be evident and the liver be quiescent. Then, again, we may have the symptoms appearing in such a way that it is difficult to know what to assign to gout and what may be wholly unconnected with that condition; being, perhaps, merely owing to some accidental complication of the liver and brought on by intemperance in eating or drinking, overwork, anxiety, exposure—what not.

As to the Diet in Biliousness

The diet in all these cases should be carefully regulated, but not according to some cut-and-dried method, such as may be good and sensible in general, but, when applied in individual cases, be subject to numerous exceptions. Here, again the brains, good judgment, and large experience of the practitioner are felt keenly and with great advantage to the patient.

It is impossible to say what food or preparation thereof will suit in a given case. The best, most practical way is, to have the patient write down accurately, for a while, what he eats and drinks, and then by degrees to eliminate or modify what seems injurious or doubtful. Everybody, almost, who is intelligent finds out sooner or later what food or drink suits him, and he should be told to continue that regimen, so far as may be.

In the beginning of an attack of biliary disorder, it is clearly foolish to insist upon one's taking food of a certain kind when the taste, inclination, and stomach rebel almost as a matter of course. These people do not then want, nor need, meat, rich dishes and sauces, sweets, and delicacies, nor much food of any kind. Fat and all greasy food repel immediately. Alcohol and tobacco to them are repugnant or become so after a very moderate indulgence.

Let such a patient suffering from biliousness take a cup of hot freshly and well-made tea, not too strong but containing a dash of lemon, and he will be thankful. Let him have a little milk toast, hot and slightly salted, and perhaps spread with a very little good butter, and your patient will be grateful for that also. A soft-boiled fresh egg, a little well-cooked rice with salt and a very good butter, some good chicken-soup, calf's-foot jelly slightly flavored with lemon-peel, a good baked apple, a roast potato, perhaps the wing of a chicken, roasted or broiled, or a sliver of well-broiled bacon, some stewed fruit, an orange, a few hothouse or Malaga grapes, may, one or the other, or two or more following each other, make a quite sufficient meal for a day or two.

To many, milk and Vichy water, half and half, may be about all they want and can take. To a few persons, as we know, milk in any form is absolutely distasteful. For these, and whenever I want the best and most assimilable food and stimulant to be given, I

advise, strongly, panopepton, in frequent small doses (from a teaspoon- to a dessert-spoonful), taken cold with a little cracked ice or carbonated water. A little brut champagne, icy cold, and a chassé café of the best old brandy or kirschwasser may occasionally be permissible, but very rarely are required. With some patients, nothing equals in its restorative effects a small quantity of good after-dinner coffee, with or without a little brandy and sugar added.

The whole problem resolves itself into the question of taste and cooking and personality—and no doctor who really knows will leave these factors out of consideration. It is here where textbooks sin, even the best of them. The authors lay down rules, and then enumerate a lot of exceptions; so it is that the practitioner is left floundering around for not a few years, until at last he has found out for himself that he must try to discover what suits the patient, and what not. And here again he is immensely helped when he knows, by having treated him on more than one occasion, the sufferer who solicits his professional assistance.

After the acute attack is over and we merely have to do with the slight disablement that has followed it, we should, little by little, return to ordinary wholesome diet.

Permit at first, a little broiled fish and one (at most two) well-selected and well-cooked vegetable, so far as possible in season or one that best bears transportation and keeping. In place of fish, we may allow broiled or roasted chicken or broiled mutton chop; and, still later, a small piece of broiled beefsteak or roast beef—both rare or underdone. After dinner, a little stewed fruit or saltines, with a bit of Camambert or Swiss cheese. A small quantity of claret wine and water, whisky and water or a wineglass of sherry is allowable, and often even useful at lunch or dinner. A good mineral water, such as White Rock or Appolinaris, is often desirable. Such a dietary should be followed for some time. Further, rich sauces, many various dishes, sweets, alcoholics in larger amounts are to be strictly prohibited, as a rule.

Occasionally a little excess or a more varied dinner, in pleasant company, will prove to be healthful rather than the reverse and is not heard from by any warring or distressing symptoms. But, free indulgence in food by brain-workers or city-dwellers is apt very soon to result in an upset of the digestion, more or less disabling for a time. Soon, if the attacks be frequently repeated, chronic congestion of the liver results, and this can be cured only by extreme care in regard to food—continued during long periods.

Exercise and outdoor life, so far as may be, must always be carefully considered. It is well, every morning before the bath, to exercise somewhat with light dumbbells; and this may be supplemented by the masseur-exerciser, which enables one to rub or massage the back of the neck between and over the shoulders and back. This instrument is simply invaluable. Furthermore, a walk downtown before business or uptown before dinner is very important. For men past middle life and in the city, especially in the late fall and winter, the game of pool gives exercise and distraction and should be recommended. This, certainly, is far preferable to sitting around the card-table and inhaling tobacco smoke and taking not a little whisky and water. Tennis for the young, golf for the middle-aged, at the end of every week or oftener if possible, is very desirable. Horseback riding in the park is nearly indispensable to some men who have a torpid liver, and nothing seemingly takes its place.

In the matter of exercise, one must, however, always use good judgment, and not overdo it. To a tired man, a brain-worker or to a man who has been on his feet most of the day, to be flat on his back one-half hour before dressing for dinner is far more serviceable than is a fatiguing walk or exercise. To many business men of large cities, taking residence in a suburb—becoming socalled "commuters"—is preferable to their never getting out of town at all. These people feel better for the breath of country air they get, even in winter, late in the afternoon and for their sleep at night. Of course, such men are obliged to get up early in the morning, to catch the train, and they always have a hurried breakfast and often do not take the time for a movement of the bowels. Yet, despite it all, their health improves. Still, in the case of other men, it is precisely the contrary. They can not stand this way of living and long to return to the city and resume their former habits, which practically suit them better, by far. Such is the singular makeup of the human body and mind.

I might continue in this way for many pages. I prefer to stop where I am and to leave it with my readers to consider the truth of what I have written. From all, whether they are with me or against me, I desire a line, telling me their standpoint. My views are simply those of the old practitioner who writes, in a very informal and matter of fact way, to tell the story of what he has seen and believes.

The Wood-Tick as a Cause of Paralysis

By Charles Stuart Moody, M. D., Hope, Idaho
Major, National Guard, State of Idaho.

MANY years ago, the poet Holmes said that once he wrote a poem in such humorous vein that upon showing it to a friend the man laughed so much thereat that he immediately expired. Holmes explained that thenceforth he never wrote as funny as he could have done. I am naturally of a merciful disposition and, consequently, will not attempt to write as learnedly as I can, for fear that you, my gentle reader, might expire upon my display of erudition, but, perhaps, also, for the further reason that it is entirely too much trouble to hunt through the leaves of my memory for obsolete technicalities wherewith to lard my composition. No, these cases of paralysis are of sufficient interest to me without the presence of scientific stilted English, while, if they should not prove so to you, you have my permission (as in Mark Twain's remarks about the weather) to turn to a medical dictionary and ladle in a few pages of its contents whenever you think that the exigencies of the occasion demand.

Now we will proceed.

Some six years ago, a mother brought to my office her infant, a girl of eighteen months, apparently stout and healthy.

"Doctor, what is the matter with my baby?" (How many of you have been asked that question?)

Like all wise physicians, I sparred for an opening. "What appears to be the matter with it?"

For answer, she placed the baby on its feet upon the floor, holding it by the hands. To use her own expression, the baby "spraddled" and sat down rather hard on the floor.

"She can't use her hands and feet," she said.

I became interested. Here was a child, the picture of health, who had never been sick a day, afflicted with complete diplegia of its legs. The mother released the child's hands, and they fell to its sides inert. The diplegia thus became a quadruplegia.

I elicited the case-history and found that there had been no symptoms of illness. The mother had noticed, a few days previously, that her baby did not walk when it was placed upon the floor, but sat down without attempting to arise; next she noticed that it was unable to move its hands and arms. Then, being a sensible mother, she brought it to the physician.

Inspection, in the nude state, revealed a well-nourished girl child, skin and color good, eyes bright, pupils normal and reacting to light, the tongue clear and not in the least tremulous. There was, however, a peculiar rag-baby effect in the limbs as the child lay upon the table.

Further examination disclosed absence of temperature, pulse good, patellar reflex entirely wanting, motor and to some extent sensory paralysis of both legs and arms. As you may suppose, to use a Missouryism, I was "up a stump."

I spent half an hour in a rigid examination and was about to admit defeat, when I chanced to pass my hand over the back of the child's head: the hand came in contact with a hard formation, about the size of a filbert, just beneath the occipital protuberance. Closer examination discovered a common woodtick (dermacentra venenosus) firmly imbedded in the tissues just at the margin of the hair, evidently enjoying his (or her) fill of good rich blood.

I removed the offending insect and thoroughly cauterized the wound with pure phenol, and told the mother to take the child home and report in a few days. She telephoned me in three or four days that the paralysis was leaving, and eight days later she returned with the little one, entirely recovered.

The incident escaped my memory until it was recalled in the spring of 1913 by an exactly similar case, with the exception that in this instance the mother herself had discovered and removed the tick. This child, too, recovered in a very short time.

Last winter was a particularly mild one in this section of northern Idaho and, so, last spring we were afflicted with a perfect pest of woodticks. An enterprising person could walk out in the timber and gather enough for a large mess in half an hour without any conscious effort upon his part whatever. About April 15 I had my first case of paralysis from the bite of the tick (I had decided by this time that the two cases instanced had been owing to that cause), and others soon followed.

These cases of paralysis were all similar, in that the children were under three years of age, that the paralysis involved both of the legs and the arms, that there were no symp-

toms other than loss of motion of the extremities and to some extent loss of sensation, that the tick had, in each instance, fastened itself on the neck just beneath the occiput and at the hair margin, and that it was pretty well filled with blood before being discovered. In every instance, the victim recovered in from two to three weeks, without any other treatment than small doses of potassium iodide—which, to be frank, I do not believe helped in the least. There have been, so far as I have been able to see, no serious aftereffects, several of the children having been under my observation since that time.

The eastern reader may be advised that this affection in no way resembles the Rocky Mountain tick-fever; the latter disease is quite a different affair.

I have not sought to go deeply into the pathology of this paralysis; indeed, there is so little to work upon that it offers little inducement for pathological study. It is interesting, however, to conjecture just why the bite of the common tick produces, in certain instances, the train of symptoms enumerated above. It has been suggested that perhaps the tick secretes some toxic principle that might account for the train of symptoms, but, if that were the case, it would seem that the paralysis should be general and not confined to the limbs merely.

Some Good Heart-Remedies*

A Study of the Vegetable Cardiac Tonics

By Finley Ellingwood, M. D., Evanston, Illinois
Author of "American Materia Medica, Therapeutics and Pharmacognosy"; Editor of "Ellingwood's Therapeutist"

IN CONSIDERING remedies acting upon the heart, a distinction can be made between those which influence the heart directly, in its functional operations, and those which are used for treatment of diseases of the heart. It may be said that there is not any definite distinction between these two classes; still, in common usage, I am inclined to think that there is. We give aconite, veratrum, and gelsemium to control that rapidity of the heart's action which is common, with simultaneous increase of temperature, in febrile disease; yet, few of us think of these remedies as applicable where the heart itself is diseased, because the conditions which lead to their use seldom are present. Furthermore, they all are heart depressants, either direct or indirect; and, as in most of the cases of heart disease there is heart feebleness and a depressant is contraindicated, these agents are avoided.

A most interesting article on the action of the remedies named on the heart could be written, as also on the action of atropine, strychnine, ammonium, and camphor; so, also, on rhus toxicodendron, bryonia, ignatia, and some one or two of the hormones; however, in this article I will discuss, in a very brief manner and merely with the idea of presenting the practical facts, a few of the agents included in the second class of remedies I have named, i. e., those that are used for the diseases of the heart.

Digitalis

The best-known of these is digitalis. There is probably no one single remedy of which in the course of more than 125 years so much has been written as of this drug, and, yet, the method in which it acts in all cases has by no means as yet been positively determined. It is certain that it is a heart stimulant, and that it may be given in sthenic conditions as an emergency-remedy, because its effect is almost immediate. When there is prostration, profound weakness, together with sudden heart failure, from violent injury, surgical shock or profound acute infection, or in the crisis of extreme exhausting or protracted disease, digitalis exercises a decisive influence; but, as to just how this influence is exercised, there is a divergence of opinion.

Schmiedeberg advanced the idea that digitalis acts directly upon the muscle of the heart, and this belief has quite general acceptance among physicians. This influence upon the heart-muscle is quite readily observed. It seems to be plain that it acts upon the muscular fibrillæ as an irritant, as

*Professor Ellingwood has just published a new and completely rewritten edition of his book on materia medica, under the title of "New American Materia Medica: American Medicine for American Physicians." For the accommodation of the many readers of Clinical Medicine who will want this book we are prepared to supply it at $5.00.

does strophanthus, or as ergot acts upon the uterine muscular fibrillæ. It certainly is not a nutritional agent. It does not increase the power of the heart-muscle nor is there any evidence of its acting directly through the nervous system. Cactus acts as a nutritional remedy and through its influence upon the nervous system increases the actual nutrition of the entire organ and of certain of the nerve-structures. This cannot be said of digitalis.

Godliet maintains that the influence of digitalis is exerted upon the walls of the arteries and that through this influence its action upon the heart is exercised. There is a consensus of belief that it increases blood pressure [now questioned.—Ed.] and exercises a direct action upon the renal secretion. Any prolonged sustaining power does not seem to inhere in this remedy, except as, through this influence and the addition of other proper measures, deficient heart-power is supplied.

In sthenic fevers, digitalis is seldom used, but in asthenic fevers its influence sometimes is positively demanded, especially where the temperature remains high and the pulse is rapid, feeble, easily compressed, or irregular from feebleness—all evidences of failure of the vital forces. In these cases, it controls the pulse and reduces the temperature as it improves the heart's action. Such remedies as aconite and veratrum would positively be contraindicated in cases of this kind.

Digitalis is prescribed for its influence upon the weak heart in pneumonia. My own experience is that in the sthenic stage it should not be administered, as its influence is much like whipping up a horse when it is still willing and able to go; one must fear that the animal will become tired and need more whipping later. In the asthenic stage of pneumonia, when the heart begins to show failure, digitalis becomes an important remedy. The influence just described, then, is plainly apparent in these cases. To children a larger dose proportionately may be given at times than to adults, although small doses, if frequently repeated, often prove entirely satisfactory.

In passive congestion in which the stasis depends upon feebleness and lack of power in the circulatory organs, digitalis is the appropriate remedy. Here, it imparts renewed force and a renewed capillary tonus, its influence closely resembling that of belladonna. It is prescribed, with excellent results, in intermittent heart action with a feeble and rapid pulse, especially if valvular disease be present or if there be muscular relaxation and lack of power.

Digitalis does not directly influence the secretory and excretory functions of the kidneys, but, by improving the power of the heart, these functions are simultaneously improved—for the time being, at any rate. Renal congestion is overcome, because the increased heart impulse drives the blood through the renal capillaries with renewed vigor, this resulting in an increased flow of urine. Under these circumstances alone, is it valuable in dropsy.

In the general dropsy of disease of the heart, there is deficient capillary circulation and the pulse is irregular and intermittent; there is secreted but a small quantity of urine, and this contains a large percentage of albumin. All this points to the administration of this remedy.

Upon the cumulative action of digitalis I will not enlarge here, since this is known. It is also known that when it is given in full dosage, for its immediate effect, the patient should assume and retain the recumbent position.

Chronic heart disease in many of its forms can be satisfactorily treated with digitalis, but each of these forms, as well as the drug itself, must be studied with reference to its peculiar influence upon the conditions involved.

Cactus

As a remedy for heart disease in general, I have obtained such satisfactory results from cactus that I have prescribed it probably more than any other of this class of remedies. Cactus increases the energy of the heart by increasing its action, stimulating the vasomotor and the spinal-motor centers, through the improved condition of the general nervous tone which this agent surely imparts. There seems to result a quickly improved nutrition of the entire nervous and muscular structure of this organ. It also exercises a direct influence upon the sympathetic nervous system, regulating its action, whatever the perversion. It influences the cardiac plexus, restoring to normal the functional activity of the heart. It increases the contractile energy of the heart-muscle, through the cardiac ganglia and accelerator nerves. It so nourishes the heart-muscle and restores its normal condition, that progressive valvular murmurs often are removed in what seems to be a comparatively short time.

My attention was first called to this remedy in 1870, before I began the study of

medicine, by the fact that a physician, a stranger unknown in our community, had prescribed it for my mother, who for several years had suffered from a most seriously dilated heart, and which at that time had been pronounced incurable, by well-known physicians of the town, and death seemed imminent. The attending doctors did not even undertake to relieve the condition. However, through the use of the cactus, almost alone, prescribed by the stranger, she improved so marvelously that at least two or three years were added to her life. It was through this, I might say, that my interest in vegetable remedies was aroused.

As to the established symptomatology indicating the use of cactus, there first of all presents itself that train of symptoms which points to weakness of the heart-muscle. Associated with this, there is regurgitation, because of valvular insufficiency; the pulse is irregular, usually small, often intermittent; there is dyspnea and a sense of weight and oppression in the chest. Every physical effort increases the heart's action, and violent exertion is sure to produce extreme distress. There is a sensation as of constriction or of a band around the chest, which is a pathognomonic indication for the use of the drug.

The older writers claimed that cactus was useful more particularly for functional irregularities, and, consequently, some of the best physicians would not prescribe it for organic trouble. It has since been found, though, that old-standing cases of feeble, organically diseased hearts often yield to a satisfactory degree to its influence. In my forty years' experience with this drug, it is in these cases that I have obtained my best results.

At the same time, in the case of young people and children, where there are valvular murmurs, and especially in rheumatic carditis in children or in carditis following measles, when given with the other appropriate and definitely indicated remedies, it certainly has worked wonders in my patients. Nevertheless, I could not possibly have other than a strong faith in it from the results that have followed its use when given alone. Rapidly growing children exhibiting valvular murmurs should receive this remedy, especially if they get easily exhausted and out of breath. I consider cactus more readily adapted to childhood than any of the other remedies named.

I have always prescribed cactus in small doses; nevertheless, I am confident that in some extreme cases it can be administered in much larger doses, with excellent result. I have nearly always used one of the liquid preparations, although splendid results have come from the granules, especially in the hands of those who use them constantly and know how to adapt them.

Because of its nutritional properties—which personally I have never been able to explain—there is brought about an improvement in atonic conditions of the brain and spinal cord, in fact, of the whole nervous system, by the use of this agent, and this improvement shows itself quickly in the functional action of all the other organs. It is a splendid remedy in neurasthenia and in some forms of paralysis, or where with feebleness there is a great nervous excitement, or where there is oppressive headache in the top of the head, with great nervousness, not uncommon at the menopause, which latter results from faults in the sympathetic nervous system of the pelvis.

It is excellent also in endocarditis and pericarditis from any cause, although Scudder did not so advise it. My experience and the experiences of many others justify its use in these cases. I have under observation a patient whom I consider entirely cured of endocarditis, who came to me seven years ago with a condition that seemed to baffle all treatment. The difficulty of breathing, which came paroxysmally, seemed to threaten death at every attack. Cactus was the central remedy around which the whole course of treatment was planned and carried out for eighteen months, without intermission. Then from time to time, for another year, there would seem to be nothing further to treat, as the patient was in excellent health. This was an unmarried woman, thirty years of age, who weighed about 180 pounds.

Digitalis is contraindicated where the stomach is irritable, and this condition is increased by it. Cactus, on the other hand, has a beneficial influence upon the stomach and seems to soothe irritability in that organ. However, where the arterial tension is increased and the blood pressure is high, where the nerve-force seems to be exalted and there is something of an excess of strength in cardiac action, cactus is contraindicated. Cardiac palpitation, when accompanied by this condition, will be aggravated by cactus, while it will decrease or be measurably controlled by gelsemium, the bromides or macrotys.

In the treatment of impotence and sexual neurasthenia, the drug can profitably be combined with avena sativa, saw palmetto, nux vomica, zinc phosphide, or phosphorus in

some one of its easily assimilated forms, with excellent results. Given alone it is of much assistance.

Strophanthus

Strophanthus has a direct influence upon unstriped muscle-fiber. It acts vigorously upon all muscular structures, especially those of the womb and blood-vessels; but its specific influence is exercised upon the heart, although also affecting the respiratory muscles profoundly. Its influence seems to be that of an irritant. It increases the systole, and there is a rise of blood pressure. Being brought into direct contact with the muscular structure of the heart, after absorption into the circulation, its influence is exerted direct, and not through the central nervous system; and this influence is more enduring than would, at first blush, be supposed. For this reason it is given, with good result, in enlargement of the heart where the muscles are flabby. Although acting in this particular somewhat like digitalis, it is not cumulative nor does it irritate the stomach to any degree.

The indications are similar to those for digitalis. It relieves difficult breathing, and is occasionally beneficial in asthma. It is used in fatty degeneration and in atheroma, and in some cases of Bright's disease. It seldom is given continuously, as is digitalis, although a few patients afflicted with goiter or exophthalmic goiter have been benefited by its continued use. It has been thought to assist in the assimilation of iron, especially in patients suffering from persistent anemia.

Convallaria

Convallaria was brought forward a few years ago as a remedy of remarkable powers in its action upon the heart. It has not found general adoption, but in certain conditions it is a useful remedy. It is used in simple cases of arrhythmia, where there is no cardiac enlargement or valvular fault. It is given in mitral constriction, where there is failure of compensation; also in mitral insufficiency, especially if pulmonary congestions occur. In dilatation of the left ventricle, it has been found useful in restoring the energy of the heart when sufficient compensatory hypertrophy has not taken place.

Convallaria is advised whenever the heart is dilated and also weak. If dropsical conditions obtain, it is useful, especially where there is sluggishness of the general circulation, where the capillary circulation is markedly imperfect and the blood pressure diminished. It should be given in small doses frequently repeated, when no harm will occur. If the kidneys are not diseased, it can be increased to a point when very large quantities of urine are secreted. In this condition, taking it with hot water materially increases its uropoietic action; but, if there be profound disease of the kidneys, there will be no response. However, it has been found beneficial in some cases of Bright's disease. Occasionally dropsical effusions are reabsorbed after this remedy is given; or, if diuresis is induced, the pulse will grow full and more regular and, often, slower, and the strength of the heart is increased.

Convallaria is useful in the feeble heart that results from the protracted use of tobacco, especially cigarettes; also from any kind of strain. We no longer talk of bicycle-heart, which was common in the period of the inordinate use of that vehicle; but, the excessive devotion to athletics as now so general among our young men brings about the same results, especially in those who also smoke; and this makes it necessary to use agents of this character.

Convallaria is an excellent remedy when indicated, used either alone or in conjunction with cactus or digitalis, or with direct nerve stimulants such as strychnine and phosphorus. It does not produce irritation of the stomach, but, on the contrary, it is of service in dyspepsia, especially if there is a tendency for the tongue to be red and thin, with elongated papillae.

Apocynum Cannabinum

Apocynum cannabinum is a remedy that was originally used for dropsical conditions only. Owing to its influence upon the heart, which I had been observing for a long time, I classed it in the first editions of my "Materia Medica" as a heart-remedy. In this, I was entirely alone at the time. Since then, this classification has become generally adopted by all writers on this subject. Wood's observations on this point have been extensive and conclusive. These and other physiological experiments have shown that it is an active cardiac poison, producing profound contraction, the heart, from the toxic influence, stopping in systole.

Apocynum seems to supply increased arterial tension, but it assists most materially in removing dropsical effusions. Specifically, it is a remedy for dropsy. The exact indications in which it is demanded are those of general dropsy, beginning with puffiness of the face or of the cellular structures beneath the eyes, and a swollen condition of the feet and ankles or of the hands and wrists.

If this effusion depends upon defective kidney action, and provided there is not too much structural change in these organs, its influence is excellent; but, where the structural change is extreme, its action is much less marked; where the dropsy depends upon heart faults, its influence is direct and satisfactory. In many cases, a tumultuous heart, associated with difficult breathing, has been controlled with this drug, especially when the heart was very feeble. Dropsy in the aged, in whom there is an irritable, irregular, feeble heart, and weakness is constant from this cause, often will be relieved by this agent.

Apocynum stimulates the circulation, to a certain extent, although it produces irritation of the stomach and intestinal tract. This latter action, however, can usually be avoided by giving small doses, but frequently repeated. A large number of physicians who have used this remedy for years unite in asserting that it is the most dependable medicine we have for general dropsies. If given in the presence of the above symptomatology, it is most reliable; still, many physicians complain that it produces so much gastrointestinal irritation that no influence upon the dropsy can be secured. Others do not feel certain about giving it, and hesitate about relying upon its influence in bad cases. Others give it with confidence, and claim to get only good results.

I would advise those who have not had experience with its use that they administer it first in doses of not to exceed 1-2 drop of the fluid extract every hour, increasing this quantity after the second or third hour to 1 drop; then, after a few doses, to 1 1-2 drops, and so on until either good results appear, or irritation, when the doses should be given further apart; the remedy should not be persisted in if gastric irritation continues. So administered, it can be readily adapted to almost any case, as the prescriber knows that after twenty-four hours, if there are satisfactory results, it may be discontinued. However, the prescriber must look for the usual general indications of dropsy, as above explained.

Apocynum has been given in hydropericardium, with excellent results, and in other conditions in which there are local effusions, as well as in hydrocephalus. One would hardly give it in the expectation of great results following in such a case, but, if its persistent use would prevent further effusion in favorable cases or would in the least abate the quantity of serum within the cranium, it would, in the case of many patients, be acceptable.

Quite a large number of physicians have employed this remedy, with excellent results, in the treatment of sciatica; 1 drop in a little water being given every half hour or hour. In certain cases, it is diluted and injected over the nerve. There are failures, of course, but also marked successes in this use of this remedy.

Cratægus

A heart-remedy that has promised excellent things in the last fifteen years is cratægus oxyacantha, or, the English hawthorn. I have received reports from very many reliable authorities as to its action, and, while these reports cover nearly all the conditions mentioned as being influenced by the previously named remedies, the consensus of opinion centers upon the action of this agent, namely, that it ameliorates the disagreeable symptoms of a chronically enlarged heart, with valvular faults, and of the dropsical tendencies and feebleness of advancing age.

This remedy must be used to be appreciated, because on the surface it does not seem to possess any profound influence. As yet I have not been able to find any report of laboratory observations about this agent that I thought were sufficiently corroborated to be reproduced. It is given in doses of from 4 to 8 drops. Those who have given it in doses of from 10 to 15 drops think that it produces irritation and unsatisfactory results. In proper doses, it relieves dropsical conditions. It controls irregularity and uncertainty of the heart's action. It seems to impart a new tone and new strength, although it cannot be relied upon to restore nervous tone or to exercise that peculiar nutritional influence that follows the use of cactus and its concentration, cactoid.

The difficult breathing, the general feebleness, and the marked inactivity, that are apparent in protracted cases of dilated heart, give way under this remedy to increased activity, buoyancy, general encouragement, and hopefulness, and the patient experiences a general sense of wellbeing. While these patients cannot always be expected to be cured, yet, the benefits obtained from this drug are often all that could reasonably be desired.

In addition to the foregoing uses, a number of individual prescribers are employing cratægus, either alone or combined with cactus, in children's diseases and in rheumatic inflammation of the heart, while in other acute and chronic disorders they claim for it highly satisfactory results. I have a great deal of confidence in the remedy, this being based

upon reports of so many practitioners who, I have reason to believe, have made careful and conscientious trials and have so reported. I am confident that it will justify very thorough and careful study.

Adonis Vernalis

Adonis vernalis is a heart-remedy that has been studied abroad, and much evidence has been collected in favor of its action, or, more particularly, of the action of adonidin, an energetic derivative. Where, from incompetent heart action that results in faults of arterial tension, the consequent train of symptoms occurs, adonis has been found to be most frequently serviceable. It is valuable in irregularity of the heart and also in the dyspnea of feeble heart or of asthma.

There is in vogue a formula, one which has become quite popular in the treatment of epilepsy, in which 40 grains of adonis is dissolved in 5 ounces of water, to which is added 160 grains of potassium bromide and 3 grains of caffeine. This is given in 1-dram doses four times a day, whether the epileptic has heart faults or not.

Lycopus

I would call the attention of readers of CLINICAL MEDICINE to lycopus as an agent that I have found of great value when, with heart faults, there are present chronic pulmonary difficulties. Whether the heart trouble is functional or organic, the irritability and irregularity or the difficult breathing with oppression in the region of the heart are all benefited; while it seems that, at the same time, there is exercised a direct influence upon the pulmonary trouble. Lycopus reduces the velocity of the pulse, exercising a sedative influence, controlling irritability, and antagonizing inflammatory processes, according to some observers, in a manner superior to that of any other remedy. If its usual indications are associated with high temperature, its influence is a good one.

Some of our older writers depended upon this drug to control hemorrhage from the lungs, whatever its cause and however exhibited. Some of our younger men have obtained good results from it and speak very highly of this particular influence. The specific indications for its use in such cases are hemorrhage, with a high, tumultuous heart action and rapid pulse, in incipient phthisis. It regulates the heart's action and equalizes the circulation in the lungs more readily even than does atropine. It is especially beneficial in these cases when there is persistent irritable cough.

I have had excellent results from this remedy in the treatment of exophthalmic goiter. I have combined it with veratrum viride and iris or phytolacca, and in one case, in which tachycardia had been pronounced for two or three years without the exophthalmic symptoms, but with respiratory and circulatory irritation, I believe this remedy was the principal agent that enabled me to put that patient into perfect health after a few months' treatment, with no evidences of exophthalmia appearing subsequently. Lycopus is advised for strengthening the action of the heart and to control the temperature in prostrating fevers—asthenic fevers—especially in prolonged typhoid fever. Evidences are very strong that it reduces the excessive heat, without depressing the vital forces of the patient; that it acts as a heart- and nerve-sedative, without any depressing influence; that it can be used in conjunction with aconite and veratrum, in doses of from 1 to 5 drops every two hours, with excellent results.

Not only in hemorrhage from the lungs but in all hemorrhages its influence is described by some observers to be very reliable, a few depending upon this in preference to other styptics in passive hemorrhages. This is especially true where there has been chronic diarrhea, or in the gastric hemorrhages of alcoholics, or in hematurias. This influence is exercised without producing gastric irritation; in fact, it allays gastric irritation and intestinal irritability, and, while increasing the appetite, it promotes digestion.

It would be desirable, indeed, if I had space, to enlarge upon those remedies that have a contributive influence upon the heart. The most direct ones would be sparteine, caffeine, veratrine, aconitine, and strychnine, but space does not permit. Another remedy that seems to promise most excellent things at the moment of heart failure or in severe cases of angina pectoris is *lobelia*. This remedy should certainly be studied with reference to this influence.

A Summary and a Comparison

A summary of the principal points of action of these five remedies and a comparison of their influences may prove to be of service to the readers, in cases of emergency or also in treating cases, when care must necessarily be exercised.

Regarding their action upon the nervous system:

Digitalis acts upon the inhibitory nerves, but it does not impart nerve tone or increase nerve-force.

Cactus is a true nerve-tonic, especially for the sympathetic nervous system. It increases the general nerve-force. Through this influence, acting upon the cardiac plexus, it imparts unusual strength to the entire heart-muscle. It seems to improve materially the nutrition of the heart and by this means to restore organic defects and to overcome functional derangements.

Strophanthus does not seem to influence the nervous system to any extent. While in some cases such an influence has been observed, that undoubtedly has been brought about by an improvement of the general circulation of the blood.

Convallaria influences the nerve-centers to a very small extent—it acts through the vagi. Often, however, much improvement of the condition of the nervous system occurs during its use, which hardly can be attributed to other influences.

Apocynum acts upon the nervous system mildly, increasing nerve-force, improving the strength of the nerve-centers, and modifying nerve irritability in feeble cases.

Action on Heart

Regarding their action *upon the heart direct:*

Digitalis influences the heart-muscle as a stimulant or irritant, through its influence upon the muscular fibers. It increases the heart action when feeble, improving its power and tone. It is not, strictly speaking, a tonic; neither is it nutritional. In fact, in overdoses, it decreases the nutrition. It improves the heart, in heart strain, in its first influence, but later it may cause collapse.

Cactus acts upon the heart through the intercardiac ganglia, as stated. It gives actual nourishment to the heart-muscle. It slowly raises the blood pressure by its influence in increasing the muscular motor energy. In feebleness, it slows the heart, but it never depresses. It is soothing in the irritability of feebleness.

Strophanthus acts directly upon the heart-muscle, by irritation of the fibrillæ, in direct contact. It imparts no strength, but, rather, it increases the force and power of the heart and raises the blood pressure.

In its direct action upon the heart, convallaria has a permanent effect as a tonic, increasing the power and force of the heart more like cactus, without the property of irritation of digitalis and strophanthus.

Apocynum, in its influence upon the heart, acts more directly upon the vessels of that organ, and, yet, it influences the muscular power permanently and increases in a slight degree the arterial tension.

Comparing the influence of these remedial agents upon the pulse:

Action on Pulse

Digitalis, when given to feeble patients, changes the character and frequency of the pulse immediately, though its influence is not always uniform; still, it can be relied upon to impart strength and force and to reduce a rapid, feeble pulse.

Cactus increases the magnitude of the pulse beat, reduces the number of the beats, overcomes rapidity, and imparts strength.

Strophanthus materially increases the strength of the pulse beat, lessens the number, regulates irritability. Its influence often is immediate.

The influence of convallaria upon the pulse occurs slowly, but the magnitude and strength of the pulse are found to be improved, and its action becomes regular, uniform, and stronger. The same statement can be made of the action of apocynum upon the pulse, especially when there is febrile action accompanied by dropsy.

All the more important of these heart-remedies, except cratægus, are represented by some active principle or a concentration. Laboratory investigation concerning this remedy has not as yet been conducted to any extent; therefore, there undoubtedly is very much to be learned concerning it.

Action on Respiration

As to their influence upon the respiration:

Digitalis improves the respiratory function, but largely through its power of overcoming capillary stasis in the lungs thereby increasing the action of the heart.

Cactus exercises a peculiar influence in relieving distressing breathing, especially if there be endocarditis or pulmonary congestion, but the influence is much more slowly obtained than that which results from the use of digitalis.

Strophanthus increases respiratory power and restores normal respiration.

Convallaria causes deep regular breathing, removes oppression in the chest, and overcomes dyspnea from mitral insufficiency.

Apocynum affords freedom of breathing only when oppression results from effusion, although, by a peculiar influence exercised by it, it facilitates the oxidation of the blood.

Regarding their influence upon the stomach and bowels:

The irritating influence of digitalis is a serious objection to its continued use. It has no beneficial effect upon the stomach. It does not nauseate or produce diarrhea, but

the continued irritation reduces the appetite and prevents the assimilation of food.

Cactus, on the contrary, exercises a very soothing influence upon the stomach. It promotes the appetite, imparts a functional tonicity to this organ, while inducing no intestinal disturbance. When there is present palpitation from gastric irritation, cactus is of great assistance.

Strophanthus in overdoses has produced vomiting and diarrhea, but in medium-sized doses no influence is exercised upon the stomach.

Convallaria is a mild gastric tonic. It increases the appetite and digestion, and does not produce irritation.

Apocynum is a violent prostrating emeto-cathartic, some patients being much more susceptible to it than others. In some feeble patients, very small doses persisted in cause severe gastric irritation, while others can take large doses without this effect.

Action on Kidneys

Concerning their influence upon the kidneys:

Digitalis actively increases the flow of urine, especially if given in the form of infusion, but it does not improve the general renal secretion. Overdoses of this drug may cause suppression of the urine.

Cactus exercises no influence upon the kidneys, except that which is brought about by improved heart action resulting from an improvement in the arterial tonus.

Strophanthus acts directly both upon renal secretion and excretion. At times it causes marked diuresis, but its action is not always uniform, although sometimes satisfactory.

Convallaria stimulates excretion and secretion to a degree, is quite active in dropsy, while inducing no depression; but its diuretic influence is secondary.

Apocynum induces secretion of large quantities of limpid urine. The solids are not greatly increased. It relieves dropsical conditions to a certain extent, through this influence upon the kidneys.

Therapeutic Applications

As to the *general therapeutic application* of these five remedies:

Digitalis acts at once when it is given in shock and in sudden heart failure, increasing heart action promptly. It is used in surgical shock, or shock from injury; in asphyxia and in poisoning; in heart failure from prostrating disease, as in the later stages of pneumonia. It is of much value in selected cases of valvular incompetency.

Cactus is not considered an emergency-remedy, since it requires some time to make its influence felt. It is used in prolonged or progressive heart weakness; in overstrained heart; in bicycle- and cigarette-heart; in masturbators' palpitation; in sexual and general neurasthenia. Cactus acts most quickly in functional derangements.

Strophanthus is an emergency-remedy in heart failure, but inferior to digitalis. It is indicated where the heart lacks contractile power. It acts well in cardiac asthma, atheroma, fatty degeneration, goiter, the weak heart of Bright's disease, and in all functional derangements. Its influence continues long after its use is stopped.

Convallaria quiets the irritable heart, and it restores strength to the heart after failure from shock or protracting disease. It is used in cardiac dropsy and in functional faults.

Apocynum is not an emergency heart-remedy, except in failure from extreme dropsy and in hydropericardium. Its influence upon the heart is but slowly manifested. It is valuable in progressive heart weakness, especially in protracted fevers. It is a most reliable remedy for dropsy.

IKE WALTON'S PRAYER

By James Whitcomb Riley

I CRAVE, dear Lord,
No boundless hoard
Of gold and gear,
Nor jewels fine,
Nor land nor kine,
Nor treasure-heaps of anything,—
Let but a little hut be mine
Where at the hearthstone I may hear
The cricket sing,
And have the shine
Of one glad woman's eyes to make,
For my poor sake,
Our simple home a place divine;—
Just the wee cot—the cricket's chirr—
Love, and the smiling face of her.

I pray not that
Men tremble at
My power of place
And lordly sway,—
I only pray for simple grace
To look my neighbor in the face
Full honestly from day to day—
Yield me his horny palm to hold,
And I'll not pray
For gold;—
The tanned face, garlanded with mirth,
It hath the kingliest smile on earth;
The swart brow, diamonded with sweat,
Hath never need of coronet.
And so I reach,
Dear Lord, to Thee,
And do beseech
Thou givest me
The wee cot, and the cricket's chair,
Love, and the glad sweet face of her!

A Few Characteristic Cancer Cases

By G. N. Murphey, M. D., Paducah, Kentucky

SINCE writing on the nonsurgical treatment of cancer in Clinical Medicine, May last, I have received letters of commendation of the article from eleven states and Canada. As there are many practical features connected with this subject upon which I did not touch in my first article, I have concluded to discuss some of these now.

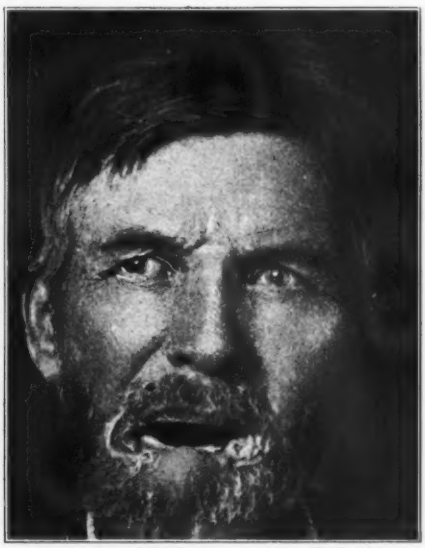
As cancer has never been proven to be a germ disease, I am of the firm opinion that it has its origin in a constitutional dyscrasia predisposing to it. This predisposition, I believe, is usually inherited, while sometimes it is acquired. This opinion I base upon the following facts:

In a large majority of all cases of cancer that have come under my observation, I get a history of the disease having existed in some blood-relation before them. I also find the disease much more frequent in the poor than the rich and well to do class of society. There is unquestionably some specific reason for its existence under these conditions.

In the first place, we know that predisposing causes to certain diseases are inherited, as in tuberculosis, insanity, epilepsy. So, also, I believe there is an inherited disposition to malignancy. That predisposing cause may be anything that lowers tissue resistance below the normal standard of health. In those who do not inherit this predisposition, but who have cancer, I believe it is acquired; and, as it is more frequent among the poor, I naturally conclude that it arises from those conditions that surround the poor, namely: bad hygiene, food of poor quality and insufficient quantity, and hardships in general.

When, now, this predisposition exists, only an exciting cause is necessary to bring the disease into existence, and this cause usually is a traumatism, either known or unknown, severe or slight, acute or chronic. I have seen cancer start from a kick or blow, from the long-continued pressure of the spectacles upon the nose or from the friction of a suspender against a mole or wart on the shoulder or back. In one case, I saw it start from pulling a hair from a pimple on the face. Other causes from which I have seen it start are: bee-stings, tick-bites, frostbite, sunburn, fireburn, extraction of a tooth, splinter in the flesh, mole or wart cut by the razor, and the like. Occasionally, it seems to be purely a degeneration of the normal tissue into a malignancy, without any known injury.

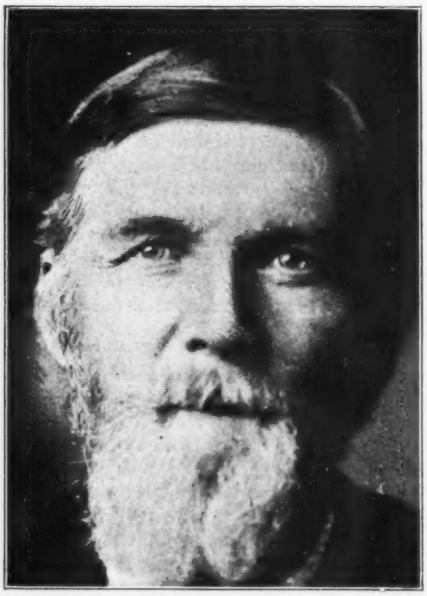
Case 1. Entire lip cancerous.



Case 1. After first treatment and lip had sloughed.

Characteristics of Cancers

In their growth and development cancer-present many different forms and characteris-



Case 1. Result of treatment. Taken Oct. 20.

tics. Some begin in a new growth, as a mole, wart or tumor, which may attain large size before ulceration or open sore shows itself. Some start as a water-blister, some as a lump beneath the skin, some as a crack or fissure on the hand, lip or the nipple of the female breast, some as a white mucous patch in the mouth and growing as a milk-white ulceration, some as an ulcer with a raised edge around it, some as a black or purple lump on the lip or tongue. Some are black, some flaming red, some white. Some begin as a brown or black scale on the skin, which falls off occasionally, this being repeated several times, but sooner or later ulcerating. Some build up, like a knot on a tree, while others are flat and depressed in the center from the start. Some are smooth on the surface, others are wartlike in appearance. Some grow very slowly, others grow rapidly.

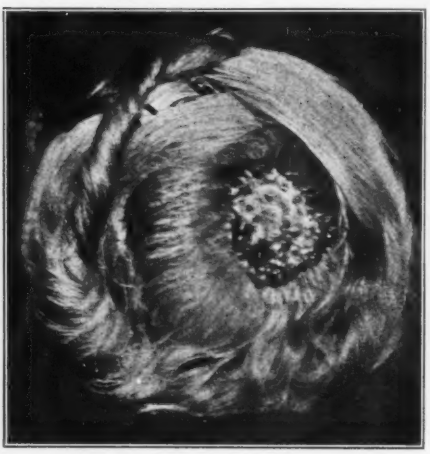
I have seen cancers that presented all the above phases and conditions. No organ or tissue of the body is exempt from attack, and neither age, nationality or sex.

The disease is rarely seen in persons under forty years of age, though Doctor Massey records a case of cancer in the eye of an infant only six weeks old. I saw one case on the face of a child eight years old.

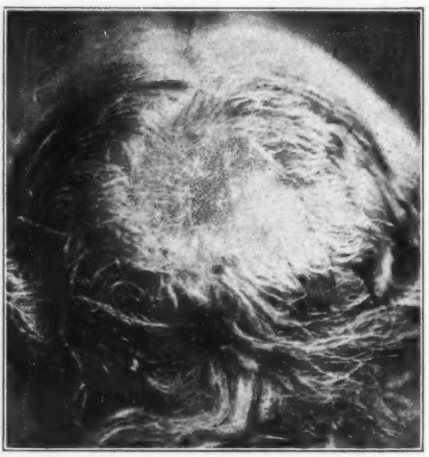
The full-blooded negro is almost exempt from the disease. Men have cancer oftener than women. The face, head, neck, and hands are more frequently attacked than is any other part of the body. The female breast and the womb are the organs next most frequently attacked. These are the most common forms and characteristics as I have observed them.

Diagnosis and Treatment

After all, diagnosis and treatment are the most important things connected with the subject. I am often surprised to see well-informed and good, successful practitioners of medicine who know little or nothing about

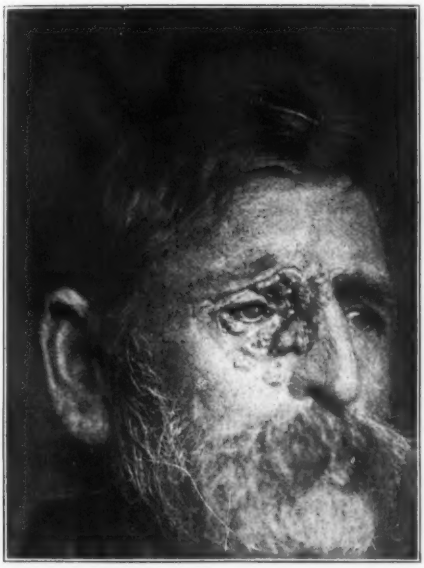


Case 2. Before treatment.



Case 2. The result.

the diagnosis of cancer, and far less about the successful treatment of it. I heard the dean of one of the best medical colleges of Kentucky say that he did not believe anyone could cure cancer. A great many of the laity do not believe any educated doctor can cure cancer. They think the disease must be cured by some farmer or blacksmith or carpenter, by some means not known to the educated doctor. I knew of a farmer and also of a blacksmith, both of whom were



Case 3. Before treatment.

treating cancer, and each one made a fatal mistake by placing a destructive caustic over the carotid artery and thus killed their patients. One of my patients told me a carpenter had been treating a rather extensive cancer in his mouth with a stick of caustic and had made it a great deal worse. I cured him by means of the electric needles.

All cancers are local at the beginning, and, if external and treated in time, before metastasis has occured, they ought to be cured. It is not always easy to distinguish between the difficult and the impossible, that is, the curable and the incurable. I have treated between three and four hundred cancers during the past twenty years, and my judgment is not yet infallible; still, in the main it is good. I never treat any case of cancer unless I can see a fair chance to cure it. I have never pronounced a case of cancer incurable that anyone else ever cured afterward. I recall one patient who came to me for treatment several years ago. I told him his cancer was incurable. He went to a rather noted specialist in Nashville, who treated him for several months, until at last the man died of his cancer. He had plenty of money and was willing to spend it freely for a cure.

As I went pretty thoroughly into the methods of treating malignancy in my other article on cancer, I shall not treat on that part of the subject in this paper. I shall present some pictures, however, of some recent cases which I have treated, to show conditions before, during and after treatment.

Some Illustrative Cases

Case 1. Patient brought to me May 27, from Winchester, Tennessee, by Dr. John P. Grizard. Entire lower lip was cancerous from

Case 3. After first treatment, when lesion had sloughed.

one corner of the mouth to the other and extending into the cavity of mouth at right side for about one inch. There was considerable sloughing of the lip on right half. This patient was treated with zinc needles and electricity, on May 29. On June 11, patient again came for inspection. The lip had sloughed off and a small focus of diseased tissue remained at either corner of the mouth and a small point or two within the cavity

of the mouth. At this time, a second treatment was given the cancer-tissue that remained. The case progressed nicely as shown in cut No. 3, with the exception of a small pointt he size of a hazelnut at the right corner of the mouth, which was treated October 20, and a complete cure ought to result by December 20. Although the entire lip was lost, yet, there is but little facial deformity.

Case 2. Lady, 70 years old, cancer on back of head, circular in shape, 2 3-4 inches in diameter. This lesion started from a small birthmark four years ago, and was of the warty, or cauliflower, growth; color of raw beef and very painful. After treatment with zinc needles, June 10, a slough came away more than 3 inches in diameter, with a thin plate of the skull 2 1-4 by 2 inches in diameter. Granulation and healing progressed steadily, until she was practically well* on October 15, as shown in the cut.

Case 3. Cancer involving the entire lower lid and half of the upper lid and other tissue, as shown in cut No. 1. This case was treated with zinc needles September 1, and again on September 10, after sloughing from first treatment. This case is now progressing finely, and I expect a complete cure to result by December 25, with the sight of his eye unimpaired. I shall have a third picture made of him as soon as well, and will send it to CLINICAL MEDICINE for publication, probably with some others.

Case 6, (the old lady shown in May CLINICAL MEDICINE, with the large cancer on the side of face) has been entirely well since May 20. I had a picture made of her at that time and sent it to the editor of this journal.

There are some other diseases that I have treated successfully by nonsurgical methods, which I will merely mention, as a description of their treatment would make this paper too long; namely: hernia and hemorrhoids. Many surgeons and medical practitioners deny that this can be done. To such I would say, investigate the subject thoroughly before you deliver your verdict. Most cases of hernia and hemorrhoids can be cured without necessitating detention from business.

*There is still a thin film of scab tissue about the size of a silver half dollar, no thicker than brown paper, which will scale off in a few days and leave the entire area clean and sound.

What of the Winter?

Suggestions for the Treatment of Seasonal Diseases

By GEORGE L. SERVOSS, M. D., Reno, Nevada
Editor of "The Western Medical Times"

AS I was looking out of my window this the morning of November the 9th and seeing the first snow of the season, there came into my mind the question of the management of the many hiemal diseases and disorders. People now are going to have colds, bronchial irritations, influenza, sore throats, pneumonia, diphtheria, rheumatics, and all the other ailments that go with the wintry season, and it behooves us guardians of health to be prepared to cope with them.

To begin with, there are, most of all, the colds. Of course, the term "cold" is a misnomer; however, that the condition thus designated occurs with greater frequency during cold weather, is a plain fact. Primarily, as soon as the first chilly night comes along, shut go the windows and doors and we once more become "birdcage"-animals. Added to this, we build fires and almost invariably get our habitations and places of occupation heated up to an abnormal degree. And then down goes our vitality. Consequently, if we would stay well, we should see to it that the quarters in which we live and work are well ventilated, but also adequately heated.

In a superheated room, our capillaries are relaxed, then, when we go out into the cold air, these vessels immediately contract. The result is that a considerable portion of our blood is thrown toward the internal organs and the body's surface suddenly correspondingly chilled. Then comes the "cold" or mayhap worse. A contraction of the vessels of the air-passages means that not sufficient warmth is given to the inspired air and that there will occur a sudden chilling of the mucosa all along the route, from the tip of the nose to the furthermost end of the bronchioles. This in turn means a lowering of the vitality of the mucous lining and the provocation of congestive or inflammatory processes along the entire tract The sudden

chilling of the surfaces, this driving the blood to the interior, increases these abnormal processes, and from that there arise the various disorders of the air-passages, upper as well as lower. And this lowering of the vitality generally makes possible the more easy invasion of the pathogenic germs of one kind or other.

Another factor that strongly predisposes to the winter disorders, is, the prevalent custom of wearing too heavy clothing. With the coming of fall, we begin putting on woollen underwear, light at first, but soon substitute—many of us—garments as heavy as we can get. Bear in mind that the majority of us of the North, and especially those who sojourn in the steam-heated offices and apartments of the cities, live in an indoor atmosphere that would be considered excessively hot during the summer months. Being overdressed, every tissue of our body becomes relaxed, and this, again, means a lowering of our defensive forces, and to such an extent that when we do go out into the cold, often extreme, our fighting-capacity is far below par. Then there is a sudden tightening up of the circulation, and this predisposes to internal congestions, if not inflammation.

With our residences and working-places well—quite too well—warmed, there is no reason why we should burden ourselves with much heavier house-clothing in winter than we wear in summer. I have noticed that those who wear linen-mesh or similar underwear the year round, suffer less from the winter maladies than do those who change to boardlike woollens with the coming of the first chilly day. Yes, I have seen some men wearing "athletic" underwear, the sort without sleeves and with leggings reaching only to the knee, and who went through winter after winter without contracting even a semblance of a cold, to say nothing of the more serious diseases.

We ought to dress as many of the Russians do; we should wear lighter-weight clothing while within our warmed habitations and when going out of doors put on extra heavy outer garments. In that way, we should be able to hold our circulatory equilibrium at all times, and there would be no sudden shock because of the sudden marked change in temperature.

Fresh Air Does Not Kill

But it is impossible to convince the multitude that fresh air and proper temperatures never killed anyone. Many of our fellow-citizens who have come here from foreign lands continue to plug up every possible crack in their houses, keep doors and windows closed, and otherwise interfere with ventilation, from the last hot autumn day to the approach of summer. Not only that, but many of them pile on all the clothing they may possess, while some of them rarely bathe during the colder months. And, indeed, strange as it may seem, some of our American-borns pursue exactly the same course.

And then we see many of our people filling up with immense quantities of food during the colder months, and that without paying any attention to balanced metabolism or to the getting rid of that which is unnecessary to sustain life. Not infrequently do we find the victim of some winter disorder whose colon is overburdened with accumulated masses, and whom a good emptying out may bring back to normal. This overeating, we know, predisposes to acidoses, and that means a marked lowering of the vitality, as a rule. Being poisoned with the products of food splitting, one finds himself the ready-marked object of pathogenic infections.

While the majority of winter diseases are a consequence of this or that bacterium, the specific cause need be considered only in passing, when we come to the question of therapeutics; that is, to the remedies to choose. If we are going to employ vaccines or bacterins, we must, of course, know the specific infecting agent; but for ordinary drugs this is not an absolute necessity.

Circulatory Equilibrium

In practically all of the winter disorders, there is present a disturbance, great or small, of the circulation. There is almost invariably congestion of the mucosa of the air-passages, with a consequent diminution of the blood at the periphery; and this is one of the main conditions which we must combat. And how shall we reestablish a circulatory equilibrium?

Aconitine is one of the best agents we have for this purpose, inasmuch as it dilates the peripheral capillaries and allows of more blood being carried to the surface; thus relieving the internal engorgement.

Veratrine has a like effect, and also increases elimination, both by the skin and kidneys, thus favoring the removal of toxic materials from the system. These two drugs, used singly or together, as a rule will bring about an equalizing of the circulation. This action I have seen demonstrated time and again

in patients showing an increased temperature, accompanied by chilly sensations.

With the establishing of the drug-effect the fever has been lowered and general warmth of the patient established—sweating, in many instances. And, regardless of the specific infecting agent, I have seen this occur in various conditions.

Indicated Drug Combinations

The lowering of the congestion also acts to decrease the exudation of materials which act as culture-mediums for the various germs, so that, as a consequence, there is a lessening of germ growth and incident germ activity.

The addition of strychnine and of digitalin to aconitine, will increase the action of the latter. Strychnine arouses the vital forces and sustains life, while the digitalin, through slowing the circulation, allows less blood—or, rather, the same amount of blood in longer periods of time—to travel to the affected part. When veratrine is associated with aconitine, the digitalin may be retained, but the strychnine dropped. And these various combinations are of use in all congestions and inflammatory processes of the air-passages, regardless of the specific infection present.

In those cases in which we find delirium, with signs of retained toxins, the combination of aconitine, digitalin, and veratrine is the indicated remedy, because—besides its bringing about an equilibrium of the circulation—the veratrine acts to open up the avenues of elimination, and thus rids the system of toxins.

These two combinations afford the physician agents which may replace each other from time to time during the various stages of all winter disorders. If there is fever, without delirium, the aconitine, digitalin, and strychnine combination is indicated; if there is delirium, the aconitine, digitalin, and veratrine come into play.

Where Atropine Is Demanded

As to acute congestions and inflammatory processes of the upper air-passages, it is possible, if seen early, to abort many of them. Here we need a drug that will force the blood out of the tissues, and no other single agent meets the indications better than does atropine; but it must be employed in the early stages, to be thus effective. When used for the aborting of such conditions, atropine must be pushed to the limit of its physiological action—that is, until the throat feels dry and a mydriatic effect is noticeable. This result may be brought about by giving, by mouth, small doses frequently repeated, or full physiologic amounts hypodermically.

However, atropine is a drug which must be watched closely, and, while the full dose may bring about the desired result, one must always bear in mind that the patient may have an idiosyncrasy for the drug, so that an undesirable effect possibly may follow full dosage. Consequently, to my mind, it seems better to administer the smaller amounts internally. Not infrequently the therapeutic effect will be obtained without the physiologic showing. In such instances, it is not necessary to continue with it, of course, to the point of saturation.

Painful Winter Ailments

Along with the diseases considered, we also encounter numerous painful conditions, some increased by motion and others relieved thereby, and it behooves us to know about the indicated drugs.

In the pleurisy of pneumonia, when every movement increases the pain, bryonin meets the indication.

In influenza, when the pain is relieved by moving the part, rhus toxicodendron—the tincture or the concentration, rhusoid—often will afford relief. This latter drug is also indicated when there is elevation and congestion of the papillæ of the tongue, with localized burning pain in the frontal region over the orbits; so, also, in those sharp, boring pains elsewhere, that are relieved by motion.

Hyoscyamine seems to act as a synergist to either of the above-mentioned drugs, and may be employed in conjunction with either.

Strychnine, through arousing the vitality, also may act as a synergist and prolong the effect of these pain-relieving agents.

Irritation of Mucosa—How Relieved

To overcome irritations of the mucosa of the air-passages, it is probable that we have no single agent superior to codeine. This is particularly true of those irritations of the throat that are accompanied by cough. It is also very effective in controlling the troublesome cough of pneumonia; but in this condition it should not be used if it interferes with elimination of the exudates.

It is probable that no other drug gives more comfort to the patient than does codeine in the controlling of the coughs which follow and stay with the patient for some time after

the acute stages of influenza, pharyngitis, and laryngitis, or common "colds." These are the coughs that keep the patient awake at nights. A quarter grain of codeine, given on retiring, often will allay the irritation and within a few days bring complete relief. Heroin has been recommended and used for the same purpose; however, this is one of our tricky drugs and, as codeine gives all the good effects and with but few of the dangers of any untoward effect, I prefer the latter.

"Tight Coughs"

In bronchial affections, we very frequently find the "tight" cough, the one which the patient says is "tearing him to pieces." Here, we have an indication for some agent that will favor greater exudation; and the alkaloid emetine, or the concentration of ipecac, emetoid, either alone or with ammonium chloride or carbonate, will give marked relief in the majority of instances. But these drugs should be administered in connection with those which will bring about a circulatory equilibrium, so that the congestion may be allayed. In fact, the drugs acting in this way upon the blood flow act as synergists to those having a local effect.

Look to the Bowels

It goes without saying that the bowels should have attention—considerable—in the treatment of all of our winter conditions. It happens very frequently that an overloaded alimentary canal has much to do with the occurrence of diseases of the air-passages. I have seen pneumonia, bronchitis, and other congestions or inflammations of the air-passages following the feast. In practically all of these conditions, the bowel should be unloaded as completely as possible, as the initial therapeutic measure, and should subsequently be kept active and clear. I do not mean by this that we should purge our patient to the point of exhaustion from the beginning to the end of the disease, but no intestinal stasis should be allowed. Initially, it will do no harm to purge the patient thoroughly—even a compound cathartic pill, or two, will not be harmful. Subsequently a daily dose of saline laxative sufficient to clear the bowel of debris will suffice.

As there undoubtedly are toxins being thrown into the circulation from this site—the ideas of others to the contrary notwithstanding—I believe it is well to see to it that the bowel is kept as clear as possible of all germs that will be productive of such toxic materials. For such purpose, one may employ the sulphocarbolates or a culture of the Bulgarian lactic-acid bacillus. I have noticed that with the bowel clean the agents used to meet the various indications are more effective, and that regardless of the fact that there may or may not be liberation of toxins from the gut. It must be remembered that the lactic-acid bacillus must not be employed in conjunction with the sulphocarbolates, as the latter will destroy the former as quickly as it does other germ-life. The sulphocarbolate should be used until such time as the bowel discharges are normal in consistency, odor, and otherwise, and then be followed by the lactic-acid bacillus.

I have no reason to believe that I have mentioned even a half of the remedies which may be used with good results in the treatment of winter disorders, but those listed are the primary ones—the ones which will pave the way for others. In all infections, we need the phagocytes, and, if a leukocytosis is not present, it should be induced through the use of nuclein. We also need a general antiseptic, and calcium sulphide, pushed to full effect, fills the indication. And then, in certain infections, the bacterial vaccines or bacterins seem to have a marked effect in the restoration to normal, through raising the opsonic index and further increasing phagocytosis: and they should be employed where the infecting agent is known and identified. But never should full dependence be placed upon these agents or the drugs otherwise indicated be omitted. One acts as a helper to the other, and every remedy of known value should be employed.

Meet the Indications!

If the indications are met squarely, it will be found that less of all drugs than usually is employed will be needed. By combating the higher temperatures with aconitine or veratrine, alone or in combinations such as are mentioned above, and that early, many of the winter conditions will yield to treatment early. In fact, the earlier a case is seen and the more nearly the indications are met, the sooner will the normal be restored. And this holds good in all conditions, whether in winter or in summer. Halfway measures, with hit or miss drugs, will rarely, if ever, bring the desired results.

The patient, and not the disease as an entity, must be studied, and the sooner we conclude to bring our guns to train upon the direct mark, the sooner shall we get results.

Know your physiologic chemistry, your pathology, and the drugs that will correct the evils, and you will have greater faith in therapeutic agents. Strike at the thing presenting itself; and that regardless of your disease as an entity, and you will accomplish much. If necessary, change your remedies every time you see your patient, just so you give him that which is indicated at the moment. Tell the patient and his family what disease he may be suffering from, but never treat that particular disease as a thing or a whole—that is, if you would be successful and not become a therapeutic nihilist. You have no specifics for diseases, as entities, but you do have them for the various manifestations coming up at various times during the course of such conditions.

An Old Doctor's Life Story

An Autobiography

By Robert Gray, M. D., Pichucalco, Mexico

EDITORIAL NOTE.—This is the ninth instalment of Doctor Gray's autobiography. At the age of eighty-six (we have just received a birthday letter from the Doctor) he is giving the readers of "Clinical Medicine" this intimate record of his romantic and adventurous life, mainly spent in struggling with deadly disease in the tropical jungles of southern Mexico. We are pleased to announce that this autobiography will be continued through a large portion of 1916.

[*Continued from page 1018, November issue.*]

THE last instalment of this series concluded with these words: "Our great altruistic pretensions are, the promotion of health and long life, and I begin to hope that I have about redeemed my pledge by the part I have contributed toward this humane endeavor." Let me devote a few moments to this phase of modern medical history.

The Aspirations of Modern Medicine

The whole trend of medical aspiration of recent time has been to extirpate disease—the prime auxiliary to the lengthening of the days of one's life. With uniformity of health, unimpaired by vice of whatever type, the lives of those who attain the adult state would have a fair chance to reach at least four- or five-score years; and when we shall have learned a little more the frightful mortality of the young will be checked. My own long life of restless activity may be attributed to inheritance from a long-lived race, as well as to freedom from vice or even shunning of liquors and tobacco. Still, somewhat of that family-legacy might naturally be esteemed as discounted by the wear and tear of a life of sixty years spent on a new plantation, in the Civil War, and in this fearful tropical practice; yet, for all that, I am by no means fagged out, and do not believe that any young doctor within a hundred miles of me down here could follow me for a month during a raging epidemic. It seems incredible that I have never been sick for an hour in all that long lapse of time, although exposed to every disease (even cholera) that has scourged Mexico during the past fifty years, save the bubonic plague, which depopulated Mazatlan. I do not now recall how many, but there have been several years in which I passed more than a hundred sleepless nights in each of them; and I have gone a whole week and sometimes longer with my clothing wet all the time from rain or sweat. Yet, I have never felt the slightest subsequent inconvenience.

Anticipating, as It Were, Metchnikoff

From my infancy to the present day, I have used clabber-milk whenever there was a possibility to obtain milk (always plentiful here), which had ever been a custom in our family, whether with any special object in view more than that of relishing it I do not know—the only object I ever had, having had no inkling of the inspiration that came to Metchnikoff. In some way, a long while ago, I got the idea that the whey of buttermilk and clabber was a fine nourishing antidote for the summer disorders of infants and little children. I have no shadow of memory how I learned of such merit of the substance, yet, I know positively that it was not the offshoot of a dream or any invention of mine. However, I found these articles so intrinsically useful that I now employ it in the treatment of the diarrheas and dysenteries of children, always obtaining precious helpfulness.

I have turned aside from the direct thread of my story, in order to advert to its predominating feature, *health*, calling milk to my reserve force, because of the prominence

it has recently acquired as an auxiliary strength to sustain senility in active vigor. The clabber is a nutrient of such high grade that I have to suspend its use occasionally, so as not to require the service of an antifat—an element that probably contributes largely to the vigor of old age; milk being our best reconstituent after wasting disease, provided we can avoid the curdling tendency of the milk.

The developments already serviceable and the experimental investigations now in process of research are destined to raise universal health in a degree high above what might seem reasonable anticipation, and much sooner than many of us dream. With the great deadly epidemics and plagues vanquished, coping with the minor enemies of health should become simplified and successful.

But I shall be unable to present any inventions or discoveries, never having ventured further than the field of the art of medicine, seeking the legitimate application of whatever promising substance science offered me to put to the test. There clearly are in the medical realm science, which discovers and develops, and art, which establishes clinical utility; and it is only rarely possible that one man will become proficient in both branches of the profession—extracting and formulating and following up a remedial substance through all the experimental ramifications of its clinical probation. The laboratory tests on animals, both small and large, hardly are guiding indexes to the possibilities in human anatomy. The legitimate clinical value of a substance is found by putting it in combat with deadly virulent or pernicious disease, or with both, as the indications of cases seem to justify. There is sometimes useful help found in what are regarded as specific substances when employed in other diseases; and in practice the dosification is found in discord with the laboratory directions. I have found dosage, in a high degree effective, far removed from the directions or any established rule of practice, by sheer accident, patients taking excessive quantities wilfully or by mistake. But of this later, in due course.

I have been situated more favorably for experimental practice than has usually been the lot of any other American; alone, as I have been, in a vast field of big plantations, with numerous desperately sick peon patients, often in times of fearful epidemic crisis. I was able, after years of constant observation, to prognosticate when a patient had but few hours of life, without extraordinary energy of counteracting influence, which I did not vacillate an instant about calling into requisition, usually saving the situation. Such was a fever peril, there being, in most cases, a temperature of 41.6° C., and the least irritation inevitably provoking the climax of 42° C. of fever temperature.

The vicissitudes of forty years of such practice cannot be recorded in any degree approximating detail, as one year alone, many times, would overreach the space at my disposal; and there really is no necessity for anything more elaborate than approximating indications of experiences other physicians may not have met sufficiently often to establish reliable conclusions.

I adopted the modern medication with an enthusiasm foreign to my custom, having ever been conservative about new departures in medical preparations. But experience confirmed endorsements with giddy precipitation, with no untoward accident with any of the substances, the physiologic action of all of them coming up to the expectation that recommendations had influenced me to entertain.

At first, the people burlesqued those "little pills," as they were termed. And a native physician, a graduate of a high-grade American college, an able practitioner and intimately amiable with me, made fun of the idea that such things could do the work of regular standard galenicals. Yet, finally, he adopted them, in self-defense, and now is as constant in their employment as I am.

Within a few years, the people had more faith in the little pills than in their household gods—"saints," as they are termed—and sent for me beyond my usual territory, sometimes, on extraordinary occasions, saying among their friends: "If the old man can but come in time with those little pills, the patient will not die." And I recall one extreme case, in a young woman; when she was told that there was no hope and that the priest must come, she demanded that they send for me instead, and, when told that she would be dead long ere I could come, she vowed that she could not and would not die till after I arrived.

Some Interesting Experiences

I entered the room about 3 o'clock in the afternoon, a feeble ray of the sun stealing through a rent in the window-curtain floated over her hectic features, contrasting pathetically with her placid marble brow, a naturally beautiful face, clearly admonishing me that fever was burning up her blood. Those

grand black eyes of sorrow were half closed, ominously showing but the whites. A romping little sister boisterously entered the room shouting, "God be praised! the doctor is here." Slowly the woman's lackluster eyes opened and met my scrutinizing gaze. A smile of recognition played over her lips and dimpled chin. Then she closed her eyes fully, as if contented, seeming to be in the trance of natural sleep.

All eyes in the crowded room were upon me. The mother and two sisters stood with hands firmly clasped and tightly pressed over their hearts. I felt that I was enveloped in an awful suspense. "Is there hope?" the mother whispered. "*She* has hope, and that means much," I made reply.

Never before nor ever since that sacred moment has there been in my soul such indomitable purpose to vanquish the angel of death as I felt then and there. And I went to work with one chance in a hundred to keep the undertaker from entering the scene before morning.

The disease had developed from the indigestion following a big feast and excessive dancing for several consecutive nights, resulting in rebellious constipation and high fever; the purges she had taken being unable to find exit through the hardened fecal mass wedged from the anus up to the colon. And, with all this, the arterioles were congested and the limbs and extremities cold, while the trunk and head were burning in a fire of 41.5° C.

I put in the limit of heart stimulation immediately, and worked a glass sound deep into the hardened fecal mass; then slowly forced glycerin through the tube, with a powerful hard-rubber syringe, till finally an ounce and a half had entered. Within twenty minutes, the mass was expelled, with an intonation almost equal to that of a gun; and all the gorging at the feast and feeds at the balls and the castor-oil and other purges came streaming into the bed with a force rivaling that of water escaping from a jug turned bottom up. The poor sufferer had to be lifted from the fermenting foul lake into another bed. But, the fever had dropped to 39.7° C.

I now began to give her strychnine arsenate, 1-128 grain, under the aconitine-rule; she being conscious and able, and more than willing, to swallow. The relief was so marked that the wornout family, one by one, fell asleep, in many grotesque postures, and all slept till daybreak. At 2 o'clock a. m., the temperature was normal and the patient sleeping in harmonious contentment with the family. At 7 o'clock in the morning, she was sitting up in the bed, sucking an orange, amid a family jubilee.

A Case of Fecal Poisoning

Another case yet more unique. I was out of my proper tramping-ground, at a big plantation-house, a couple of days. News came in the forenoon that the young son of a wealthy neighbor was dying in the hands of four physicians, who had been called, one after another, in rapid succession, from a nearby town. Late in the afternoon, there came a hurry-call for me. I galloped over, in a quandary as to the motive for desiring my presence. The afflicted father met me a little way from the house and told me that his son was past all hope; that he had an attack of worms, but no purge had acted, not even one drop; and that the doctors had given him up as lost, but suggested calling me. This, I understood, that he might die in my hands.

The four gentlemen were smoking at the shady end of the corridor, far from where I entered the house, their work done. I found that there was yet working-strength in the heart for a few moments; yet, the patient was a well-defined moribund. I turned from the bed abruptly and confronted the stricken father and anxious daughter, a queenly girl, yet, more self-possessed than her sire.

"Is he dying? Save him, and $10,000 is yours," she blurted out almost hysterically.

"Do not talk absurdly, muchacha, but hasten and bring me two liters or more of hot water," was my answer.

In a trice the girl came running with a pitcher filled with water boiling on the fire. I saw the bottle of castor-oil from which the boy had been dosed. I flung about a liter and a half of the water into a basin and into that enough castor-oil to cool it sufficiently so as not to scald; I pushed the glass sound up the rectum as far as I could in haste and pumped the water and oil into him with a powerful bulb-syringe; finding resistance at first, but soon it entered rapidly.

In thirty minutes, the flood-gates gave way, and the mass of green fruits, that resulted in costiveness and congestion, acute indigestion, and the worm-medicine and purges and all were quickly deposited on the bed. The patient yawned. In an hour, he was sitting up in the bed playing with his little brothers, forgetful of the contortions he had passed through.

I was pressed to sup with the four confreres, who were ignorant of the proceedings.

more than that they had seen the patient at play in the bed. They were all bright men, but had diagnosed worms, because of positive worm-symptoms and the statement of the family that it was an attack of worms. The doctors assured me that I had performed a miracle, entirely out of the medical province. I then assured them that I was almost daily treating like cases among the peon tots and the Chimule Indians on the big plantations where most of my work was done; these attacks resulting from eating crude rice, unhulled, and the hull of cacao-fruit and other trash. These children almost invariably were being treated for worms; that I saw at a glance, with the worm-remedy not yet removed from the room, that they had been misled and had treated the boy for worms, on the apparent symptoms and the report of the family. I then told them the simple and quick salvation I employed.

I think it might be as well to state here the treatment I applied to the Indian laborers who came from work in the evening, doubled with cramps and colics, having eaten their fills of trash during the day. They were employed on big American rubber-plantations, whose people I attended. I kept a solution of apomorphine ready-prepared, so that an ounce contained 1-4 grain. And when they came in thus ill, I gave them an ounce by rectum; and they had immediate relief in the active emesis that followed, as effective as the standard hypodermics. And I had treated half a dozen, more or less, in the time required to prepare the hypodermic for one. I never treated the same man twice for that imprudence. They always were new Indians from the mountains.

H-M-C as an Ally

I had another interesting case, this being an aristocratic young woman who had ingested half a dozen purges, without the slightest result. I told the mother to bring hot water for an indispensable enema.

"Before that, death for me!" exclaimed the sufferer, in her excruciating agony.

Then, not the least nonplussed, I told her I must give her something to calm the pain she could not endure through the night.

"That, yes," she blurted out.

I gave her the limit of H-M-C anesthesia. In less than an hour, she seemed to sleep as innocently as an infant. I then told the mother to bring the water.

"But she will wake and fight like a tiger," the mother said.

I told her to have no fears. In less than an hour, the girl was almost swimming in a lake of filth.

"What shall we do?" enquired the mother.

"Clean up. Change the bedding and the clothing of the patient," was my advice.

I had no means of guessing just when she passed from under the subtle influence of the magic triad, but she softly fell from that into the tranquilizing arms of Morpheus. She had been so exhausted by sleepless torture that refreshing restfulness held her securely entranced. When she awoke, her room was full of early morning sunshine and fresh flowers; and she said to me, suavely smiling: "What precious medicine was that you gave me? I have slept serenely all night and am perfectly well. I am as hungry as a wolf."

I had cautioned the mother never to hint the deception practiced on her daughter.

One has to resort to any crook or turn that may help the patient, down here amid the dearth of what you all possess in plethoric superfluity. I have vaccinated many a person after stealthily securing the auxiliary of anesthesia, and performed other trivial little things, even so small as extracting a thorn.

All of you who are not surgical fanatics know that there are many small operations performed, under bluster and flurry, which are absolutely unnecessary. I have done very little aristocratic practice in all my time; yet, where I did such spasmodic work, the women told heir women friends that they liked me, because I took an interest in their trivial afflictions without forever insisting that it was imperative to cut them. And, I imagine, it were as well for suffering humanity that there were more bloodless surgery than exists in this sanguinary age. Yet, I am for surgery, first, last and all the time, whenever there is no other remedy; but I have recourse to the knife only as the last resort.

(*To be continued.*)

True Specifics

With Special Reference to the Treatment of Senility

By William F. Waugh, A. M., M. D., Chicago and Muskegon

THE work of the therapeutist of the future, the work that is the duty of the therapeutist of today, is to advance the development of remedial specifics. In no other way can we rid ourselves of the uncertainty that has paralyzed our efforts in the past and attain anything like scientific precision in directing our remedies.

Physiology has developed to such a point that we can, in most instances, detect the functional disorder and in many of them determine the cause. The removal of an actively operating cause is our first therapeutic duty; but, in many instances, this does not repair the damage or even stop the morbid processes that have been set in operation. "Remove the cause" has been a sort of fetish; but the absurdity of making this a universal rule, was aptly illustrated by a smart "co-ed," who gave it as the treatment of the vomiting of pregnancy!

Pathology has revealed to us the nature and extent of lesions and in some conditions that of functional aberrations; and, as this science is developed, we may approximate certainty in our chief or first task, namely, that of determining the best point for therapeutic attack. That this by no means is a matter of course, that even as a whole the profession may mistake it, may be seen in the universal belief that the biliary calculus is the point for attack, instead of the cholecystitis and cholangitis that render the presence of the stone objectionable.

The Search for Therapeutic Weapons

When the point for therapeutic attack has been determined, we proceed to look over our armory for the suitable weapons.

For such specific purpose, we may select specific weapons for one of two purposes: either to combat and beat down the disease, considering it a pathologic entity, or to enable us to attack the dominant factors, considering the malady, as described in our nosology, simply an assemblage of symptoms grouped under its accepted appellation for the sake of convenience.

As coming under the first view, we cite the germ-diseases—a large and rapidly increasing group, since many affections once considered general now are known to be caused by specific microorganisms. And here is the proper field for the vaccines, antitoxins, bacterins, opsonins, hormones, agents with which such brilliant work is being done today. In our enthusiastic admiration for these remedies, however, we must not lose sight of the fact that their field must be limited and that our tendency is, ever to push a thing far beyond its legitimate limits. Try to fix these limits, but keep a cool head, and do not jump clear over the hedge into the slough beyond it. It is this that has relegated numerous deserving remedies into unmerited oblivion.

The great body of diseases is not of the specific kind, and the names affixed to them, I have said, simply are convenient designations for certain symptom-complexes that possess no pathologic or etiologic unity. We do not have one germ that induces endocarditis; another one that engenders myocarditis; a third, pericarditis; and still others, pleuritis, pneumonitis, mediastinal lymphadenitis, besides various other anatomic structural inflammations. Rather, we may find a disorder, lit up on one of the surfaces of the heart, that may or may not extend, in varying degrees, to the neighboring structures.

The Ailing Bladder, and Remedies Therefor

A better example is presented by the bladder. Setting aside the infections and mechanical lesions, we find, as a man grows older, that he may suffer a gradual loss of power of the sphincter or of the detrusor, or of both. In others, there may develop irritability of either or both those structures. We ought to have at our command agents that increase and others that will diminish the irritability or the power of these functions. Have we?

Gelseminine is the sedative, *par excellence*, for the bladder, especially for the detrusor muscle. This alkaloid is a safe remedy and its continued use does not ulteriorly bring about any perils in its wake. In that excessive irritability manifested in chordee, gelseminine is the most powerful agent known with which to reduce the inflamed tract to

quietude and secure grateful rest for the rebellious organ.

Arbutin is a slowly acting remedy, but the most potent in our possession for combating vesic catarrh. Even in those of old standing, the result of gonorrhea, the powers of this valuable glucoside are far greater than most practicians surmise. The difficulty with them (not with *it*) is, that they fail to appreciate the length of time needed for the drug to develop its curative effects. Arbutin is a remedy to be administered for a period of months, running into years. It slowly influences the diseased tissues toward health, traveling back the road which they passed from normal to disease. How can any one expect a cystitis that has endured for years, with the gonococcus still present, to be cured within a few weeks? Nature does not act along surgical lines; rather it proceeds on those of the agriculturist, who prepares his soil, plants his seed, then awaits the rains and the sunshine to bring his labors to fruition in the ripening harvest.

Arbutin should be given in increasing doses in these old, inveterate conditions; even up to 15 grains, thrice daily, of the pure glucoside. Ordinarily a dosage of from as little as 1 grain up to 7 grains a day suffices.

The Vesical Tonics

When we come to the vesical tonics, the case is different. Probably the first remedy one thinks of here is cantharides. This is a direct irritant. In very small doses, Spanish fly tones the vesical sphincter, possibly also the detrusor, although of the latter I am not sure. But, it is also an irritant of the entire urinary tract, including the renal cells. In larger doses, the irritation approximates that produced in the skin by a fly-blister, the cells lining the urinary ways being loosened and destroyed, as is the epithelium in the other instance. I can not but look upon this as a very dangerous remedy, in whatever dose; nor am I aware of any therapeutic action it possesses, except the local irritation produced. Moreover, any beneficial effect that it exerts must be temporary, and in no sense curative; and I see no good reason for inducing a pathologic irritation lasting for some hours or even days, by which time the effect is over. Then the doses must be repeated and probably increased—and all this time the renal cells are suffering damage. The safe use of cantharides internally demands a nicety, a caution that is all too rare with the average practician. In my view, there is no place for the internal employment of cantharides in modern medicine.

Strychnine the Vitalizer

Strychnine? Surely! That wonderful vitalizer stimulates every function of the body, including that of inhibition. But, why stimulate all, when only one needs to be? Unnecessary stimulation is an evil in itself and may lead to other disarrangements as undesirable as that which we seek to relieve. Besides, when you have used your strychnine, what have you left for any emergency arising? You have played your ace and are helpless. Better use your smaller trumps as long as they take the tricks. *Nota bene*—if my metaphors are unintelligible to any reader, I refer him to the textbook of Professor Hoyle.

When the sphincter needs tone, we have a good remedy in thuja—5 to 10 drops of the "specific medicine" three times a day. This is useful for leaky bladders, where the will is necessarily invoked to restrain the flow of the urine, the involuntary restraint being weakened. It has proved effective, in my hands, in either sex. I am not sure as to its action in long-continued use, as it possibly contains a renal irritant—and I feel exceedingly anxious regarding all agents that irritate those cells.

We still require a specific tonic for the vesical detrusor. Take a common case: An aging man finds the expulsive force of his bladder steadily declining. The formerly powerfully expelled stream dwindles to a tedious dribble. The involuntary sphincter also weakens, although to a less extent. There is no disease, no catarrh, no enlarged prostate gland; the urine is normal. It is easy to dismiss the case cavalierly, telling ourselves that this is the necessary concomitant of advancing years, and thus letting the man drift into catheter-life without lifting a finger to save him or making any effort to delay the progress of the malady. Are we as helpless as that? *Must* we let such patient go to the advertisers who claim ability to give aid, and to whom this man surely will resort if we weakly confess our impotence? Better to make some sort of an effort, if only to keep him from such a peril.

Metchnikoff is the one man, in recent years, who has had the courage to assert that age is relative and death postponable. Whatever there may be in his suggestion of the bacillus bulgaricus (and it has not been disproved yet), he has given us reason to believe that, by taking thought and utilizing known

facts, we may at least conserve youth to its possible limit, and ward off that molecular death that progresses for years, many or few, before the final extinction of consciousness.

Dogwood as a Vesical Tonic

With considerable diffidence, I put forward the suggestion that in the dogwood (cornus florida) we possibly may find the agent that specifically tones the vesical detrusor. My attention was directed to this remedy after observing that in several of my patients there was associated with this vesic debility some feebleness of erection. For the latter condition, I have for years employed cornus florida with marked benefit; and it occurred to me that, when these two pathologic conditions were so intimately associated, the same remedy ought to prove effective in both. As yet my cases are too few for making public, and the nature of the trouble is such that the patients would seriously object to anything that might direct attention to them personally; yet, the results have been so encouraging and so uniform that I feel justified in recommending a trial of the remedy.

Dogwood-bark is one more of those slowly acting drugs, and I have directed that it be taken for a month at least in each of my cases. One need not despair if the improvement takes nearly that length of time to manifest itself. The remedy is strictly a tonic, not a stimulant (that is, it does not arouse sexual desire), but the tonic effect seems to persist for quite a time after it has been discontinued. It has no action as an aphrodisiac. I have not observed any objectionable effects, immediate or remote.

The dose? I have employed the "concentration" (cornuoid—formerly known as cornin), giving 7 granules, of 1-6 grain each, three times a day. I have not associated any other remedy with it, but have kept the bowels clear and clean, thus preventing that autotoxemia blamed by Metchnikoff for old age. However, I have avoided aloes and podophyllin, each of which has been credited with a tonic action upon the erectile tissues, and have employed, instead, saline laxatives alone, besides occasionally an enema.

It would be interesting to ascertain the action of the reputed aphrodisiacs (phosphorus, damiana, and the rest) upon the vesic detrusor; especially so of the amorphous phosphorus recommended by Professor Nascher. These drugs acquired some repute in the days when the action of remedies was not studied, further than the assertion that they were "good for impotence." Now we ask just what a drug does, and how; what functions it affects, and how; and it may be that some one or other of the factors of this group of senile maladies may be favorably met by them. At any rate, this is the best road open to those who desire to see progress in drug-therapeutics.

Penetrating Wounds of the Eye

By Thomas G. Atkinson, M. D., L. R. C. P. (London), Chicago, Illinois

SOONER or later, every practitioner runs against a case of penetrating injury of the eyeball—a gunshot wound, a blow from a jagged stone, a stab with a sharp stick, or some other form of edged object of violence that lays open the eyeball and reaches the internal structures. No injury of the eye is more likely to occur than this one. When it does happen, it is much more serious than the same degree of injury to almost any other part of the body; and it calls for prompt and intelligent treatment if the eye itself, to say nothing of the vision, is to be saved: yet, of all the emergencies that the practitioner is called upon to meet, this one finds him most unprepared and nonplussed.

The very first consideration in such cases is that of infection. Of course, every penetrating wound of the eye constitutes a potential infection; and the eye, for various reasons, is exceedingly susceptible of becoming infected. Therefore, it is to be assumed that the eye *is* infected, and, hence, prompt measures are to be taken to combat this assumed infection. At the same time, it is also to be assumed that the eye *is not* infected, and equally careful measures are to be adopted to prevent its becoming infected. Both of these precautions are absolutely imperative, and to neglect them constitutes criminal negligence.

First-Aid Measures

First aid to such patients, therefore—aside from handling the injured eye as little as possible—consists in irrigating it gently but

thoroughly with a 1 : 5000 solution of mercury bichloride (this being done by gently drawing down the lower lid and injecting the solution from an eye-dropper, by way of the canthus and the conjunctival sac), placing a sterile gauze compress over the closed eyelid, and then bandaging it lightly; postponing all further treatment until the patient can be removed to proper aseptic quarters, preferably to a hospital.

This should be the next step, and should be carried out with the utmost care. The patient must not sit or stand upright, far less be permitted to walk or to ride in a car to the place of his reception. We must assume that the injury has seriously compromised or is in danger of seriously compromising the relations of the delicate internal structures of the eye, perhaps, even, the contents of the eyeball are in momentary danger of evacuation, and thus the upright posture or the jolt of walking or riding may precipitate an irreparable mischief. Hence, he should be transported, gently and carefully, by means of a stretcher or an ambulance, lying on his back. It might be added, in passing, that this supine posture is to be maintained until the eye has received whatever surgical attention may prove necessary and is well on the way to healing.

Everything else being equal, the sooner you get at the treatment of the eye, the better the chances of success. By success, I mean the maximum preservation of tissue and function; for, I wish to caution the practitioner, right here, against giving the patient or his friends any exaggerated promises as to the ultimate outcome. Penetrating wounds of the eye are *almost never* followed by anything like complete restoration either of structure or of function. Just how much restoration there will be, it is impossible to tell until the eye is well along in the process of recovery. Consequently, you can make no justified promises on this score; while almost certainly you can predict that restoration of the organ will not be complete.

As I have said, the sooner you begin treatment, the better the chances. But, if the probabilities of infection are very great, it is better to wait twenty-four hours, making antiseptic irrigation in the interval, than to risk panophthalmitis by operating upon an infected eye. If infection already is a fact, then it is imperative that you wait for a subsidence of the infection.

Have the patient and yourself prepared, with thorough surgical precautions, before you even undertake an inspection of the injured eye. Have ready at your hand the following equipment:

Drop-light or something equivalent to it,
Magnifying lens,
Eye-speculum,
Small bent forceps (iris-forceps),
Small curved scissors,
Small curved skin-needles and fine silk,
Small flat spatula or probe,
Tepid normal salt solution,
Bichloride solution, 1 : 5000,
Gauze, sponges, eye-droppers, etc.

Cocaine the eye thoroughly with a 5-percent solution, using the same technic that was recommended above for irrigation, that is, drawing down the lower lid and putting the solution into the sac.

First, gently draw apart the upper and lower lids—taking care to exercise your pressure and traction, not upon the eyeball, but upon the bones of the orbit—and ascertain whether the eyeball is collapsed or not. Slight losses of vitreous are not of serious import; but, a considerable loss, sufficient to cause collapse of the globe, is practically hopeless. If you find the globe in marked collapse, you will be obliged eventually to enucleate the eyeball or else to have it enucleated by an eye-surgeon. This, of course, need not, and, indeed, should not be done at once. The thing for you to do in such a case, therefore, is, to irrigate the eye with the bichloride-solution, dress it again with a sterile gauze pad and bandage, then send the patient back to bed, to await enucleation. Occasionally, in the interval, the vitreous will so reform as to render enucleation unnecessary; but not often. I do not recommend the general practitioner to undertake the enucleation, because the removal of an already ruptured eyeball is rather a difficult procedure for inexperienced hands.

If, however, the globe is not collapsed, proceed to a thorough inspection of the eye, first under no special illumination. Ascertain where the laceration and penetration is. In the majority of cases, this occurs at the junction of the sclera and the cornea, because there is the line of least resistance. See whether the iris is protruding from the wound. Find out whether there are any particles of metal, glass, stone, or whatever the agent of injury was, embedded in the outer eye.

Next, take the magnifying lens, have an assistant hold the light a little above and to one side of the patient's head and focus the light obliquely upon the cornea and pupil. This will enable you to inspect the anterior

chamber and to ascertain whether the iris is badly damaged and also whether there is any foreign body in the chamber.

If the iris is neither protruding from the wound nor appears to be damaged, and there is nothing extraneous in the chamber, all that you need to do is, to irrigate the eye thoroughly but gently with the bichloride-solution, follow it with normal salt solution, close the eye, bandage it as before, and leave it to heal.

If, however, the iris is protruding, you will have to attend to it. First irrigating with mercury bichloride, you introduce the eye-speculum, but do not allow it to stretch itself to the full—give it to an assistant to hold so that it exerts no pressure upon the eye. Better, still, if you can manage without a speculum, but that requires adroitness. With the small curved forceps, pick up the iris, pull it (very gently) out of the wound until you are sure that it is quite free from all entanglements, then take the small curved scissors and cut off, at the wound, all that you have pulled out. Cut it through with one sweep of the shears and let the remainder of the iris drop back into the eye. Now take the small flat probe or spatula and, introducing it carefully into the chamber through the wound, gently stroke the iris into proper position. Irrigate the eye again with the bichloride-solution, followed by normal salt solution, instill a few drops of a 1-percent atropine-solution, then bandage as before.

If the wound be a very long and gaping one or if it extend into the sclera, you will have to take a few interrupted stitches with fine silk thread.

After-treatment consists in rest in the recumbent posture, and a fluid diet for a few days. Unless there are signs of infection, the eye should not be disturbed for forty-eight hours. It may then be inspected, a fresh instillation of atropine made and a new bandage put on.

No prognosis can yet be made as to the restoration of vision; for, the condition of the lens cannot yet be seen through the clouded humors, and the clearing up of the anterior chamber is problematical. Daily dressings and instillations of atropine should then be made for a week or ten days, at the end of which time the bandage may be removed and the patient allowed to wear a transparent eye-shield. Or, if his surroundings are satisfactory and the wound is well healed, he may go without anything.

A careful examination of the eye should now be undertaken, in an attempt to arrive at some idea as to the permanent status of the vision. First by oblique illumination (described above) and then by means of the ophthalmoscope, an attempt should be made to ascertain the condition of the crystalline lens, the retina, and so on. Perhaps, however, this task had better be referred to an oculist.

If the general practitioner has faithfully carried out the measures that I have here outlined, he has done his full and intelligent duty in these cases of penetrating eye injury, and whatever the ultimate outcome, he cannot be held responsible for any of the unavoidable residue of disability.

The Letters of Doctor Leonidas Playfair

Addressed to a Young Man Just Entering Practice

By A. H. P. Leuf, M. D., Philadelphia, Pennsylvania

[*Continued from page 1005, November issue.*]

MY DEAR FRIEND: Doctors get sick as do other people, and on these occasions they are (or should be) treated by other physicians; the latter usually exacting no charge, although some of them do. Whether this taking pay is right or not, is an open question with many; still, to me it seems that what is the right practice under such circumstances admits of no difference of opinion. A doctor should not be expected to pay for professional services rendered him by a brother physician, except when thereby put to actual expense—for instance, the payment of railroad-fare or the loss of a half or a whole day, this entailing a corresponding diminution of his regular income. On the other hand, no charge should be made for services that another physician must pay. Do not let a doctor render services for which you are under obligation, unless you send him a proportionate remembrance for his labor.

I knew a physician who had received an injury, concerning which I was consulted, and he entered suit for damages. Then, upon my advice, he consulted a well-known specialist, with a view to having him testify for him in court. This surgeon made a single examination, and took a few notes (as is customary under such circumstances) from which to refresh his memory and possibly gain such additional knowledge as might be needed at the trial or in preparation for it. The case was postponed upon two occasions, and finally was settled out of court. Before the specialist even could be called upon by the plaintiff, he sent a bill for $50 for his single examination that had not cost him more than ten minutes of his time. This was so wantonly outrageous a violation of professional courtesy that, when asked by the gentleman what had better be done about it, I suggested that no attention be paid to the claim, but that the doctor making this charge should be reminded in what position his action placed him in the estimation of the plaintiff and his professional friends; and then a reasonable fee should be offered.

Physicians' Fees

On August 2, 1901, Judge Armstrong, of Camden, N. J., tried and adjudicated the subjoined case, as follows: A woman had been attended by Doctor Godfrey for four years, for which he rendered, as preferred creditor, a bill for $349. The woman had been afflicted with Bright's disease and had been sent by the Doctor to Bedford Springs, as a part of her treatment. While at the springs, she was obliged to call in another physician, and she finally died at that place. Doctor Godfrey's bill was contested, on the ground that it was not preferred; that he could not have been her attendant in her last illness; but that, on the other hand, the doctor at Bedford Springs had attended her. The court held that the treatment of the doctor at Bedford Springs must be considered auxiliary to that of Doctor Godfrey, the same as that of a physician called to attend another's consumptive patient in an attack of hemorrhage that ended fatally before the regular attendant could arrive; that Doctor Godfrey's general treatment, it was proper to assume, was being adhered to so long as he had not been formally dismissed, and there was nothing to show that he had been; that her trip to Bedford Springs was part of her treatment by him, and that this carried with it such auxiliary treatment by any local physician needed at the place whom she might call in to treat her, in the place of Doctor Godfrey, because of the latter's distance from her place of abode. This judgment seems perfectly just, and should be remembered.

After the death of the late H. M. Curry (a partner in the Carnegie Steel Company), his attending physician, Dr. J. O. Flower, presented to the estate a bill for $5243 for professional services rendered to the deceased. It was for a period of five months, and included a trip to Atlantic City, consuming twenty-one days. His rate of charges was, $25 per visit at the house, and $100 per day while at Atlantic City. Experts called to substantiate this claim agreed that the amount was not excessive. The Doctor maintained that his treatment had prolonged Mr. Curry's life sufficiently to let him make at least an additional million dollars, which seemed to him an added reason why he should rate his services as he did, rather than at a lower figure. His claim was allowed.

Legal Decisions Concerning Doctors' Prescriptions

According to Dr. J. W. Jervey, the courts of the country have distinctly settled the following eight points:

"1. The patient has no legal right to demand a written prescription or written directions from the physician.

"2. It is right and wise that the druggist demand and procure from the physician his written orders for the compounding of prescriptions.

"3. The physician has the undoubted right to designate what pharmacist shall fill his prescriptions.

"4. The written prescription is simply an order from physician to pharmacist. It is, through courtesy and by virtue of custom and convenience, handed to the patient for transmission, but the latter has not, at any time, the slightest right of possession in the instrument.

"5. The druggist has at least the right of permanent guardianship (perhaps of outright possession) of the prescription, and he must keep it on file for reference and for any form of proper investigation.

"6. There can be no right, extenuation or excuse for a copy of a prescription, with physician's name attached, to be taken by druggist, patient or anyone else without the authority of the physician.

"7. The careful physician should invariably retain a carbon copy of every prescription he writes.

"8. If a druggist refills a prescription without the order of the physician who wrote it, he does so on his own responsibility, and he has no legal or moral right to leave or place the physician's name on the container."

Telephone Service

Medical advice given by a physician over the telephone from his office should be charged for as an office-call, while that which is given in the same way from a telephone that can be reached by the physician only by leaving his house should be charged for as a house-call. Supplementary instructions overlooked at the time of the preceding consideration of the case should not be charged for, nor anything else that is merely supplementary to the last visit, and which should have been said at the time. Additional advice given by telephone at the request of the patient or his caretakers, and made necessary through no fault of the physician, should be charged for as usual.

Is Ignorance on the Part of Curer and Curee Sure Road to Success?

The following quotation from a professional friend and former student of mine, in his sixth year of practice in a New Jersey town, is a true, but by no means gratifying, presentation of one of the great essentials to socalled success in medical practice: "I have come to the conclusion," he writes, "that it is necessary to know but little to practice medicine, and succeed financially. It is not what we know, it is what our patients think we know. A pleasant manner and diplomacy, and a little paregoric or calomel, and success is sure. I have learned much in the last five years. I have learned to treat the most common disease of the people—ignorance. Treat a whole family at once for the above disease, get their money, and leave them satisfied."

Certificates of Death for Insurance Companies

One of the greatest impositions practiced by large corporations upon physicians is that of insurance companies in their requesting physicians to fill in and sign, gratis, one of their usual certificates of death. It is rather a remarkable fact that this is not vigorously resented, and that no concerted movement has been made by organized bodies of medical men to oppose such wanton disregard of the professional obligation of the physician to his patient, and of his right to compensation for trouble and valuable service in no way part of his duty to the patient.

These certificates usually require the physician to state the actual and apparent age of the deceased. the nature of the illness, its duration, the times of his attendance, and whether the patient was afflicted with any other disease, an affirmative answer to which would very likely have the effect of canceling the obligation of the policy, particularly if the patient had been afflicted with the incipient stages of disease, such as consumption, at the time he was insured.

These questions constitute invasions of the sanctity of the privileged relation of doctor and patient. It is a wanton disregard of the physician's rights and duty. It can have no other object than that of possibly discovering some excuse for the nonpayment or scaling of insurance due, on the ground of misrepresentation by the insured, which it is hoped may be discovered in that manner. I will also add that the company obligates itself, in every contract of insurance, to pay the amount due upon receipt of proof of death, provided there is no violation of the agreement of insurance on the part of the insured and that the premiums due have been paid.

The proof of death is a matter of record with the proper public functionary with whom certificates of death are filed, in which the cause of death is also stated. That is adequate and sufficient to compel the company to pay the amount due. Physicians should not lend themselves to being used as talebearers or spies for insurance companies.

Furthermore, it is an aggravation to be expected to submit to this imposition without compensation. The custom probably has originated with industrial insurance companies, which insure, at a 5- or 10-cent weekly rate, in a sufficient sum to about cover funeral expenses. Deaths here frequently occur among a class of people who are not very reliable, and the risks are so carelessly taken, under a loose arrangement, that the companies may quite easily be imposed upon. Hence, they take the additional precaution of having the doctor's testimony added to their other evidence as a guarantee that everything is proper. Still, it is no part of the duty of the physician to help make up deficiencies in the management of insurance companies, especially without adequate compensation, and more particularly when this requires an abuse of professional confidence that we should not be guilty of even for any amount of compensation.

Contract-Practice

You will hear much that is favorable and much that is unfavorable about contract-

practice. The thing implies an agreement to practice your profession at reduced rates under specified conditions. There can be no question as to the right of any doctor to do this, unless he is bound to the contrary by special stipulations. If he is a member of a medical society having an established fee-bill, and to which he has agreed expressly or by implication, he violates his obligation to his fellow members if he undertakes to do work for less than the agreed rate. He will often be compelled to work for reduced pay. A long illness or a succession of shorter ones in a poor family can never be paid for in full. It is often advisable for him to make a reduction, in order to get anything at all, for few people are so honest as to beggar themselves in paying a bill even though they may be credited with being dishonest because of nonpayment of a part.

A working-man with a large family and a very limited income may ask you to become his family physician, upon the condition that, should your bill amount to more than a specified sum for the year, you will discount it in increasing ratio according to its size. Such a contract is merely anticipatory of what you would necessarily be obliged to do, as in the preceding instance.

I see no objection to either of these practices, especially the latter, provided the agreement is honestly made and kept. The doctor who permits himself to be imposed upon is foolish.

Contracts with Individuals

You may make a definite contract with an individual to render professional services at a stipulated sum per annum, obligating yourself to see him in your office at regular intervals for examination and advice, even though he remain perfectly well. This is a proper-enough contract, if neither party is unfair to the other. The advantage of such an arrangement to the patient is, that it assures to him the continued interest of a competent physician in keeping him in the best possible health during the contract-period, or that it secures to him all the medical attention he may require during that time, should he get sick. After weighing every possible consideration, he determines what would be an advantageous contract, the doctor being wholly within his right, if they can agree.

I see no objections to contracts of this kind on the part of the doctor, if they are made in good faith and with proper judgment. Similar agreements may be made for an entire family, and would, on the layman's side, be wisely preferred by anyone of limited income, methodical habit, and honest dealings. It would enable such a person to know in advance the cost of sickness. He (or she) would, by this means, have the doctor insure him and his family either good health or medical attendance during illness. If the doctor safeguards his own interests in such a contract, it is entirely within his right to make it, even if he belongs to a medical society having a fee-bill. But it would require a fair estimate of the family's probable need for medical attention during the contract-period, together with its value according to the prevailing rate. Should this aggregate much more than the head of the family can afford to pay, and the doctor were willing—had the services already been rendered and the bill presented—to discount it proportionately and still continue his services thereafter with a willingness to discount future bills in the same way if they were too large to be paid in full, then, I say, he has a right to make such a contract with these points taken into consideration.

Contracts with Beneficiary Societies

There is another contract that may be made with a socalled beneficiary society. The usual method consists in receiving quarterly (or at some other regular period agreed upon), a certain *per capita* sum for every member of the organization, in return for which you agree to render necessary medical services to any member of the body, either at your office or his home.

As to whether this contract is a proper one or not, depends upon several circumstances. It is not proper if a fee-bill has been adopted by the medical society of which the doctor is a member, for the *per capita* payments by these associations usually are so small that they aggregate only a fraction of what a doctor's regular fees would be for the same services. Should he not be bound by any fee-bill, it becomes a question of policy whether such a contract is advisable or not. There arise at once the two questions of the welfare of the profession at large and of that of the individual physician. He may benefit himself temporarily if he is in financial distress, though he injure the profession at large. Ultimately he is sure to injure himself individually, for few men are valued above their own estimate.

Another view of this matter is, that the usual charge for a call in the office or at the house is at retail, and that the doctor has the right, established by precedent in business,

to reduce his charges to what might be called a wholesale basis, upon condition that he receive a large block of work. This is putting compensation upon a mercantile basis, and is against the established custom of the profession and the usual conception of the status of medical practice.

But, after all, is not this matter of compensation an adjustment of values, an arrangement, a balancing between supply and demand? The question arises, whether, under the stress of modern competition, the honest wage-earner, in seeking definitely to secure medical services for himself at a minimum figure, to be paid regularly to the doctor, does not net the latter as much as if he made call upon call and for which subsequently he either received no compensation whatever or only a small part payment, and this not because of the dishonesty of his patient, but because of his poverty?

Thomas Carlyle long ago well suggested that all things are right because they are, being justified by their existence. Much of the opposition to the society-contract system is due to the objectors being unable to make such arrangements themselves. An assurance of $300 per year, in return for a certain amount of perfunctory work that can be done in a small percentage of the doctor's time, is a godsend to many a beginner.

Inasmuch as I have advised young men to render services for anything or for nothing, until they become too busy to do so, provided they render them gratis for the worthy and impoverished only, so can I see no objection to their making agreements with beneficiary societies to do certain limited work *en bloc* for a relatively small consideration. It is a bird in the hand that is worth the proverbial two, three, four in the bush—that being about the proportionate ratio of pay received as compared with the standard.

The fact to be considered is, that most of this work for beneficiary societies is done in the office, because men cannot afford to get sick and lose wages. They know that they can see the doctor at once without charge, and, hence, usually call in time to avoid sickness in bed; wherefore their ailments seldom require more than limited attention.

When, however, societies include an entire family in their provisions, the doctor's pay shriveling in consequence to startlingly small proportions—not exceeding from 10 to 20 percent of the ordinary charge—it is an imposition to which no one would submit but a fool, sure soon to gravitate to his proper level. The old man who has been in practice long enough to be doing a paying business, but who, nevertheless, finds himself so impecunious that he deems it to his advantage to take such a position, thereby stamps himself either foolish or incompetent. The best way to counter stupidity of this kind is, to remind patients that doctors are pretty fair judges of their own ability and the value of their services, that those who consult a man of that stamp must abide by the risk they run of being improperly treated, and that, when they come to grief in consequence, it is merely an instance of one fool destroying another.

Another point of difference between individual contracts and beneficiary-society contracts that compels consideration occurs to me. This is, while the agreement with the individual or family considers in each instance all the special conditions, varying proportionately under differing circumstances, that with the society makes a uniform low rate for all alike, regardless of variations in ability to pay. Then, again, it must not be forgotten that the general average pay for a given period—say, one year—may even up these differences. This, too, varies with membership, that in a large city yielding a great divergence in the earning power of members, while those in small industrial or mining districts, where the work and pay is very uniform, shows a much more uniform earning capacity *per capita*. All these things must be considered, and that very carefully, before contracts of this kind are accepted. As a general proposition, they should be avoided.

(*To be continued.*)

LUCKY is he who can get his grapes to market and keep the bloom upon them, who can carry some of the freshness and eagerness and simplicity of youth into his later years, who can have a boy's heart below a man's head.—*John Burroughs.*

What Others are Doing

THE PREVENTION OF PELLAGRA

In the December, 1914, number of CLINICAL MEDICINE (p. 1100), we called attention to the theory advanced by Goldberger of the United States Public Health Service, that pellagra is caused by a poverty-diet, characterized by the consumption of an insufficient quantity of protein. This theory is further developed by this scientist, in conjunction with Waring and Willets, in *Public Health Reports* for October 22, 1915, page 3117.

In order to test the validity of the protein-starvation hypothesis, it was decided to submit to dietetic tests as large a number of individuals as possible at some institution where the disease was endemic. In the article in question, the reports of experience in three of such institutions are submitted, these being two orphanages located at Jackson, Mississippi, and the Georgia State Sanitarium.

In both of the orphanages, pellagra had been recognized every spring for several years. For instance, in the first one—designated as "M. J."—there were 79 cases of the disease during the spring and summer of 1914; while in the second orphanage—designated as "B. J."—there occurred 130 cases of pellagra during the same period. Both institutions were overcrowded, and in both the hygienic and sanitary conditions were unsatisfactory, while the dietary was found to contain a preponderance of carbohydrates. In both of the orphanages, therefore, when these dietetic tests were decided upon, a very decided increase was provided in the proportion of fresh animal and leguminous protein-foods.

In detail, milk and buttermilk were added to the diet, every child being given one or the other at least twice a day. Eggs had not previously been included in the regular diet; the writers, therefore, prescribed at least one egg at the morning meal for every child under 12 years of age. Prior to this year, fresh meat had been served but once a week. Under the writer's direction, the ratio was increased to three or four times a week. Beans and peas, which had been conspicuous in the diet only during the summer and fall, were made an important part of hearly every midday meal at all seasons. The breakfast cereal was changed from grits (a corn food) to oatmeal, with the object of reducing the maize and increasing milk consumption. The corn element in the diet, however, was not entirely eliminated. Cane-syrup, or molasses, was entirely excluded for some weeks. Later, this was allowed, in small amounts, only at three or four evening meals a week. Prior to this time, it had been customary to serve molasses freely at two or three meals each day. This was the essential diet adopted in both orphanages.

The result of this treatment was, that in the orphanage "M. J.," during the present year, and barring recent admissions, pellagra has disappeared entirely. In orphanage "B. J.," in which there were still 105 of the 130 cases of pellagra observed in 1914, only one child has contracted pellagra-symptoms this year. Of the pellagra-patients of 1914, 69 have been continuously under observation for at least a year, and not one has shown any recognizable evidences of a recrudescence of the disease.

The results obtained in the Georgia State Sanitarium have been equally striking. Two wards, each containing about 40 adult pellagrins, have been under the observation of the United States Public Health Service officers.

The diet of the patients in this sanitarium has been modified along virtually the same lines followed in the two Mississippi orphanages. Fresh milk, buttermilk, fresh beef, dried peas and beans, and oatmeal have been added to the dietary, while grits and syrup have been practically excluded. Here, 72 pellagrinous patients (36 colored and 36 white) have been continuously observed from December 31, 1914, to October 1, 1915; and not one of these 72 subjects has presented any recognizable evidence of pellagra this year.

It may be added that the results have been checked up by the observation of "controls," that is, of other patients who have received the previously prevailing diet, and of these

40 percent have presented the usual annual recurrence of pellagra.

ECONOMIC STRESS AS A CAUSE OF PELLAGRA

One of the most interesting papers in the symposium upon pellagra appearing in *Puplic Health Reports* for October 22, 1915, is that by Edgar Sydenstricker, the *Public Health* statistician, who in this paper studies the possible relation of the increased cost of food to the increasing prevalence of pellagra. As he points out, the lower the economic status of the white American family, the greater is the pressure for sacrifice in diet, particularly of animal protein foods, since the latter are the most expensive. This pressure falls more heavily upon American families of the lower classes than it does upon European families or upon European immigrants; studies of the budgets of the latter having shown that they spend a considerably larger proportion of their income for their food and less for other purposes than do Americans. The latter are inclined to make sacrifices in diet in order to gratify less-important wants and desires.

Another factor to be reckoned with is, the low wage paid in the South, particularly to the industrial population. Sydenstricker shows, for instance, that the average annual income of a southern cotton-mill family is $822, as contrasted with $1022 for the New England cotton-mill families. This difference is accentuated by the fact that, while rents were practically the same in the North and the South, food prices in the industrial localities in the latter section were, as a rule, considerable higher than in the northern states. Also, the foods most readily available in the South were of a distinctly different and lower type than those available in the North. For instance, meat is not produced largely in our southern states and is more expensive there than in similar localities in the North and Middle West.

This latter fact is brought vividly to our attention through data gathered by the United States Bureau of Labor, which demonstrates that in the northern states the average family consumes about 1000 to 1100 pounds of protein, while in the southern states the protein consumption averages only between 700 and 800 pounds. Furthermore, while the consumption of wheat-flour is slightly larger in the South than in the North, southern families consume much larger quantities of corn, cornmeal, rice, molasses and syrups, and very much larger quantities of fats, especially in the form of bacon, salt pork, and ham.

The resulting condition of protein-starvation, we may gather from Sydenstricker's report, is a general one for a large proportion of the population of the southern states, and it has been accentuated during recent years by widespread financial and industrial depression, beginning in the latter part of 1907, and which has continued in varying intensity to the present. One feature of this period is, the falling in the per capita consumption of meat. In 1900, this was 211 pounds; in 1914, it was only 160 pounds. It is possible that this reduced consumption was more decided in the southern states than in those of the North.

Looked at from the point of view presented in the preceding, the etiology of pellagra must be found in widespread economic conditions, rather than in those of a local sanitary and hygienic character. The disease can, presumably, be wiped out by increasing the standards of living, providing we can teach the people how to live correctly.

Before passing final judgment upon the validity of the theories presented by Goldberger and others, we should bear in mind that these men have not covered the entire ground. Even if we admit that an improper diet is the cause of pellagra, we have yet to determine *what are the real factors* in the erroneous diet that is responsible for the disease. This problem is also being considered. Listen, for instance, to Mizell. On the other hand, do not let us come too quickly to the conclusion that the factor of infection can be excluded. That still is to be reckoned with.

ECONOMIC METHODS OF PREVENTING PELLAGRA IN THE SOUTH

The following practical applications are drawn by Goldberger from the study of the diet-problem in connection with pellagra. We quote from *Public Health Reports* for October 22, 1915 (p. 3130). In order to secure suitable modifications of, and improvements in, the diet of the whole population, Goldberger recommends the following:

1. An increase in the diet of fresh animal and leguminous foods, particularly during the late winter and spring. This may be accomplished by (a) ownership of a milch-cow and increase in milk production for home consumption; (b) poultry and egg raising for home consumption; (c) stock raising; (d) diversification and the cultivation of food crops

(including an adequate pea-patch), in order to minimize the disastrous economic effects of a crop failure and to make food cheaper and more readily available; (e) making these foods as accessible as possible in the more or less isolated industrial communities, by providing markets, particularly butcher-shops throughout the year.

2. A reduction in the diet of the carbohydrate (starchy) foods. We should: (a) improve economic conditions, increase wages, reduce unemployment; (b) make the other classes of foods cheap and readily accessible.

PELLAGRA: THE OTHER SIDE OF THE PROTEIN-STARVATION THEORY

Perhaps the most striking fact about pellagra is its rapid spread within recent years. This is strongly emphasized by W. D. Cross (*Tex. Med. News*. Aug., 1915, p. 774). He declares that in 1910 there were fewer cases in the whole state of Texas than there are today in the single county of Navarro. In the entire south-central and eastern portions of the state, great numbers of pellagrins are to be found in every community. This is true of his own county and in his own city of Corsicana, especially in that section of the town that is not provided with a sewerage system. Doctor Cross has observed that in the well-screened, sanitarily kept homes in which sewerage systems have been installed there have occurred very few cases of pellagra, as well as of other kinds of disease.

In 1910, after an investigation, he was able to find only 12 cases of the disease. In the same territory, today, there are not less than 500 recognized cases, and many of the physicians in his county place the number as high as 700 or even 800. Doctor Cross believes that this rapid increase of the disease can be explained only upon the hypothesis that pellagra, like several other hitherto mystifying maladies, is of protozoan origin; and he believes that the virus is transmitted by the bite of an insect. He takes sharp issue with Goldberger, of the Public Health Service, who—as we have shown elsewhere—believes that pellagra is ascribable solely to faulty metabolism, due to an unbalanced dietary.

Cross is convinced that insufficient or improper nourishment cause the disease only through lowering the natural resistance, so that extraneous infectious organisms more readily take possession of the body. "If faulty metabolism causes pellagra," Doctor Cross argues, "why haven't we had pellagra all the time? or is it for the reason that we have recently had faulty metabolism? Why don't we have pellagra in all the states of America? Is it because their diet is scientifically balanced? Why don't we have the disease in all the countries of the earth? Only a very few of the countries of the world have the disease."

Doctor Cross has very little to say regarding the treatment of pellagra, but he favors the use of an arsenate, such as atoxyl or some similar preparation. If the arsenic is used early, he says, the disease can be controlled.

FATS AS A CAUSE OF PELLAGRA

In the preceding articles we have given the conclusions of the officers of the Public Health Service relative to the influence of diet upon the etiology of pellagra. However, these gentlemen fail to explain why it is that a low-protein diet gives rise to this disease, and why a high-protein diet cures it; also, why pellagra prevails in some sections of the country, but is entirely absent in others; why, for instance, it is not met with in the larger cities, where economic pressure produces conditions of chronic semistarvation in thousands of inhabitants.

A reasonable hypothesis, which may serve to clear up these questions, is presented by George C. Mizell in *The Atlanta Journal-Record of Medicine* for August, 1915 (p. 214). Doctor Mizell's theory has already been presented by himself in CLINICAL MEDICINE. Thus, Doctor Mizell believes that the origin of the disease may be ascribed to the habitual excessive consumption of those types of oils that are readily oxidized in the tissues, especially corn-oil. He epitomizes his belief as follows:

(1) The association of corn with pellagra is not a myth; (2) the distinctive constituent of corn is a fat or oil which differs from other oils or fats of the group to which it belongs in the relative proportion of the fatty acids which it contains; (3) all pellagrins for a long time have been ingesting (at meals) excessively of some of these oxidizable fats—the corn-oil being the one most generally consumed; (4) when the consumption of these oils is limited or is excluded, the pellagrous state disappears in the course of time, unless the disease is in a far-advanced stage.

According to these observations of Mizell, therefore, correction of the diet must involve, not merely an increase in the proportion of protein, but also a decrease or complete

exclusion of the oils and fats, and particularly of that to be found in the corn-foods.

Doctor Mizell includes, among his measures, also calcium sulphide in very large amounts in the treatment of these patients, upon the hypothesis that this remedy favors the oxidation of the oils deposited in the body tissues.

Also, in our Miscelleneous Department, see a reference to the pioneer work of Pixley, who *several years ago, in these pages*, showed that protein starvation causes pellagra.

PICRIC ACID IN PELLAGRA

Picric acid is being extensively used in Texas in treating pellagrins. W. T. Wilson, of Navasota, Texas (*Tex. Med. News*, Aug., 1915, p. 781), seems to have been the first (or one of the first) to introduce this remedy, which he declares will restore the entire alimentary canal to its normal condition within a very short time when properly employed.

Doctor Wilson began prescribing picric acid in May, 1914. He was called to see a man who had been severely burned in a powder explosion, and dressed the sores with picric-acid gauze. While in attendance upon this patient, he was called in to a near-by house to treat a demented mulatto girl, whom he found suffering from all the classical symptoms of pellagra. It happened to occur to him to apply some of the picric-acid gauze, which he had with him, to the lesions on the girl's arms and legs; then, thinking that possibly local applications of the same keratogenic remedy to the inflamed mouth mucosa might be of value, he prescribed a 1-2-percent solution of this substance as a gargle, at the same time directing that she swallow 25 drops of a 1-percent solution every three hours. Besides, the girl was put upon a milk and egg diet for ten days.

To the Doctor's surprise, this young pellagrin woman had completely recovered within thirty-five days; her mouth symptoms disappeared in seven days, the intestinal troubles in ten, the mental condition cleared up in twenty-one days, and the skin was normal in twenty-five days.

In his paper, Doctor Wilson is able to report his first 100 cases treated with picric acid, his patients ranging in age from 16 months to 82 years. He has kept full records of every case. He also reports another 100 cases treated by eight other physicians, all of whom also had employed the picric-acid treatment. Of the total number of 200 victims treated, 3 have died, 2 of those of pulmonary tuberculosis and 1 of chronic nephritis. There have been only 8 instances of recurrence of the pellagra among these 200.

One fact that should not be lost sight of is, that, in addition to the picric-acid treatment, the majority of these patients have been placed upon a milk-and-egg diet, which doubtless also had something to do with the improvement.

EMETINE IN PELLAGRA

We already have called attention to the favorable results reported by a number of physicians who are using emetine in the treatment of pellagra. The number of patients thus far treated with this remedy is too small to make positive statements as to its value. However, we wish to call special attention to an article contributed by Doctor Bass, of Knoxville, Tennessee, who is using this remedy and securing excellent results (see p. 1149). We have been promised an extended report from another of our readers regarding the use of this alkaloid, for publication in one of our early issues.

If we were asked to suggest the most important expedients for the treatment of pellagra, we would be inclined to advise the following: (1) a dietary rich in protein (milk, eggs, peas, beans, and fresh meat) and sparing of carbohydrates and fats; (2) thorough saturation with calcium sulphide; (3) thorough cleansing of the alimentary canal, with associated intestinal antiseptics, preferably with the sulphocarbolates; also 1-2 percent pioric acid as a mouth wash and as an application to the eruption; (4) attack upon any parasitic element with hypodermics of emetine hydrochloride—particularly if there is associated pyorrhea; (5) tonic medication with quinine hydrobromide and sodium cocodylate.

It is not to be assumed that all these remedies are indicated in every case.

OPTOCHIN (ETHYLHYDROCUPREINE) IN PNEUMONIA

Two contributors of the *Berliner Klinische Wochenschrift*, G. Rosenow, of Koenigsberg, and A. Peiper, of Stetin (cf. *Muench. Med. Woch.*, 1915, No. 17, p. 585), speak a good word for optochin (ethylhydrocupreine) in the treatment of pneumonia; however, both agree with previous writers that, in order to be of any use, it must be given at the very start—not later than the third day. Properly prescribed, it ensures a rapid and mild course

of the attack, and "seems destined to reduce the mortality rate." Still, failures are recorded, while transitory visual disturbance occasionally will occur.

In view of the interest in ethylhydrocupreine, as a result of the studies in the Rockefeller Institute (see Doctor Biehn's article, this issue), we may "pat ourselves on the back" to the extent of calling attention to brief articles on this substance which appeared in CLINICAL MEDICINE in May, 1913 (p. 424), and February, 1914 (p. 161). In a recent editorial, *The British Medical Journal* (Oct. 9, 1915) expresses regret that optochin is so organotropic (i. e., toxic to the human organism) that its value is conjectural. If it can be used in association with a homogeneous serum (as pointed out by Doctor Biehn) possibly this objection may be overcome.

SALVARSANNATRIUM: IMPROVED SALVARSAN

Insolubility and technical difficulties in preparing for use attaching to the original salvarsan were responsible for the subsequent evolvement of neosalvarsan; a modification indeed greatly superior in these respects, but, unfortunately, at the same time decidedly less potent. To meet the consequent wishes of the profession, Ehrlich himself prevailed upon the Hoechster Farbwerke to undertake further experimentation, and their chemists, after much labor, seem really to have hit upon a tolerably satisfactory compound, one that not alone in no way is inferior to salvarsan in intensity of action and therapeutic value as an antispirochetic, but the getting ready of which for use is extremely simple and well adapted for general practice. However, while these are the preliminary announcements, clinical investigation has not as yet progressed far enough to permit of this new arsenical compound being introduced commercially.

As shown in the title, this modified soluble salvarsan, into which sodium (natrium—Na) enters, has been given the name of salvarsannatrium. A number of expert practitioners have been and are trying it out, among them, Doctor Fabry, who from the very first has been employing Ehrlich's "606" and its succedaneum on an extensive scale at the municipal hospitals of Dortmund (Prussia). In a joint article with Dr. A. Fischer of the dermatologic department, Fabry has made public their observations regarding salvarsannatrium up to May last (*Muench. Med. Woch.*, 1915, No. 18, p. 612), in which he embodies the views as here stated; being extremely well satisfied with the preparation and unreservedly recommending it—with the proviso mentioned.

We shall not at this stage enter into the details presented, referring those personally interested to the original article or its rendition in American publications devoted to this department of practice, but will merely point out a few salient facts.

Salvarsannatrium (bearing the laboratory mark No. 1206 A) is free from hydraldite, and is freely soluble in water, the solution showing an alkaline reaction; however, after some experience, a 0.4-percent salt-solution was given preference. The arsenic content is, roundly, 20 percent, hence, the dosage the same as that of salvarsan; nevertheless, patients were found to bear relatively larger doses well. Thus far the chemical is supplied in tubes containing, respectively, 0.3, 0.45, and 0.6 Gram, these representing single doses. The amount of the solvent was successively decreased, so that at the time of writing a dose of the substance was dissolved in 50 times its weight of vehicle (the bulk of the injection ranging between 150 and 50 Cc.), which is well borne; greater concentration is to be tried. The administration is exclusively by venous infusion, the introduction intramuscularly or subcutaneously being strongly counseled against, the more so since neosalvarsan meets the latter requirement and, under correct technic, does not give rise to necroses.

The clinical phenomena closely parallel those produced by salvarsan, and in the treatment of several hundred patients (more than 1000 injections) the well-known unpleasant side-effects were but rarely observed; while severe disturbances, such as vomiting, impaired consciousness, even death, did not occur, although a few times there was slight nausea or chills some hours after a large dose.

Doctor Fabry (like Ehrlich) places great emphasis upon the injunction never to employ this remedy in ambulant patients, but in their cases to use exclusively neosalvarsan, lest possibly great harm befall. Indeed, it is dangerous to treat, ambulantly, with salvarsan or the new remedy, for example, apoplexy, hemorrhagic optic neuritis, aortic aneurysm and insufficiency.

Finally, the author insists that the combined course of treatment with mercury is just as indispensable for the new preparation as it is in the case of every other arsenical. The author's statements are supported by most

interesting and convincing illustrations from practice.

Among others (besides the foregoing) recently writing in a similar favorable vein about salvarsannatrium, may be mentioned C. Gutmann, of Wiesbaden, who also (*Berlin. Klin. Woch.*, 1915, No. 16) considers it quite equal to old salvarsan, decidedly superior to neosalvarsan, and as marking a great advance in simplified technic.

As an interesting pendant, in one aspect, may here be adduced the statement by Rud. Krefting (of the Royal Hospital), appearing in the *Norsk Magazine for Laegevideskaben* (cf. *M. M. W.*, 1915, No. 17), to the effect that in the last four years he has treated 718 syphilitics, and has been using salvarsan exclusively (a total of 7200 injections). All but 3 were treated ambulantly. Krefting asserts having had just as good results as follow the combined salvarsan-mercury system.

SPECIAL DIAGNOSIS AND VALUATION OF AORTIC-VALVE INSUFFICIENCY

Insufficiency of the aortic valve is not of equal significance, in every instance, in its effect upon the circulation and, consequently, physical capacity; hence, the importance of a definite diagnosis. Whether the condition may virtually be negligible as to the amount of exertion the organism will bear or whether exertion brings a severe circulatory disturbance or even death, is determined by the volume of blood that with each heart beat uselessly fluctuates to and fro between the atrium and the ventricle. This subject was discussed at some length by Doctor Ehret, of the naval hospital at Hamburg, at a meeting of the staff-members held last January (*Muench. Med. Woch.*, 1915, p. 122), who presented the following views:

While the degree of insufficiency can be judged with but little difficulty, the intensity of the diastolic sound central over the sternum is without any significance; for, this sound quite often is very loud in mild cases, but may be nearly inaudible or entirely absent in extremely severe ones. The main stress is to be laid upon stretching of the left ventricle. Next in importance are, the amplitude and rapidity of the pulse, the capillary pulse, and the tonus of the arteries.

Next to be considered is, the nature of the etiologic development, whether conditioned by arteriosclerosis, syphilis, endocarditis (infectiousness), aortic dilatation or trauma. Also one must learn whether the defect is stationary or progressive, examinations to take place at greater intervals; in young persons with a sufficient heart, attention being paid principally to the amplitude of the pulse—if this (of course, always under similar circumstances, and best before they leave the bed) is found to increase, then almost certainly the valvular lesion is growing worse.

PROGNOSIS IN AORTIC-VALVE INSUFFICIENCY, AND DIGITALIS-THERAPY

As to the prognosis in the condition considered in the foregoing paragraph (loc. cit.), Doctor Ehret reminded his hearers that the heart is able to compensate better and more lastingly a lesion of this kind than it can, for example, a mitral stenosis; nevertheless, all in all, the prospects in the former are much worse than in the latter trouble. Then, considering the treatment, he *warns* specifically *against* the *digitalizing* of an *insufficient heart*, the outcome of a defective aortic valve, to the point of marked slowing of the pulse.

For the reason that the diastole constitutes the dangerous factor; namely: by virtue of the defective valve, the aortic pressure rests, during the diastole, upon the ventricle incapable of resisting it, while further, the duration of the diastole partly determines the amount of backward-flowing blood, that is, needless and useless work. But, slowing of the pulse results mainly from a displacement of the diastolic action. These points were illustrated by a number of case-histories.

A DOMESTIC CURE FOR CORNS

Believing that the general doctor's knowledge of cures, especially of the simpler kinds, should be encyclopedic—in order to enable him to enlarge his range of choice under all the varying and often trying circumstances of practice—we venture to present the following domestic, or "popular," method of removing corns without resort to chemicals or surgery; a cure we find highly recommended by the query editor of a German newspaper, after several experiences in his family. It is truly simple, indeed, even though somewhat tedious. Here it is:

Give the foot a prolonged soaking in hot water every evening for several [four or five?] days in succession. After this, every evening, wrap the foot in a broad bandage wrung (not too strongly) out of cold water, and over this wet packing draw large woolen socks. Now thoroughly cover the feet with blanket

and pillow (or go to bed), and leave it thus for some three hours; then the foot is washed off with luke-warm water, well dried, and protected with a light stocking. Lightly anointing with petrolatum is good practice.

The point is, of course, that this mild steaming thoroughly softens the horny growth, which then can be pulled out with finger-nails, "root and all," our authority says—thus obviating the use of the knife; adding that, in compensation of the trouble entailed, one enjoys a fine sleep with this warm-pack. While nothing is vouchsafed, this pack, in case of a first failure, presumably must be repeated daily until the corn has become loose enough.

BROMIDE SUBSTITUTION FOR IODINE IN SURGERY

While recent experiments, conducted in Germany, on the substitution of bromine for iodine as a surgical disinfectant are inspired by caution (should, possibly, a scarcity occur before the end of the war), these efforts are not devoid of broader interest, for, no one can foresee what new uses may eventuate from a wider application; although another underlying impulse is that characteristic trait of the German that makes for that efficiency, now the wonder of the world, that ever is on the alert to prevent economic waste and to reduce the cost of existence. Among those investigating this question are K. Feist and F. Bonhoff, both of the German navy, working in collaboration, and who have published their observations in the *Muenchener Medizinische Wochenschrift* (1915, p. 132). Professor Feist is the chemist and staff apothecary.

The present use of iodine in surgery rests, primarily, of course, upon its direct bactericidal action; but there also is associated with it a secondary phase, in that it enters into organic combination with the tissues, from which it then again is slowly liberated, and thus exerts a prolonged and intimate antiseptic and stimulating effect upon wounds. Bromine chemically is more energetic than iodine, hence, a more powerful direct bactericide; however, for the same reason, its albumin compounds (as also is true for bromoform) are less easily dissociated, consequently its secondary influence upon wounds is trifling. (Chlorine, for several cogent reasons, must be ruled out altogether, we are told; still, later work by investigators from the Rockefeller Institute, in France, has given us a chlorinated dressing-lotion for wounds.)

So, bromine—especially in view of its relative cheapness—would constitute an excellent medium for sterilizing the hands and the operative field, but for certain practical difficulties. Alcoholic solutions of bromine rapidly spoil because of chemical changes taking place, so that they have to be freshly made for each occasion. On the other hand, aqueous solutions also are not sufficiently stable, and not being diffusible do not penetrate into the skin, while the water evaporates too slowly.

In view of these objections, the authors tried chloroform as a solvent, and with very satisfactory results, except that, because of its intense action, the strength of the solution had to be limited to 5 percent. Inasmuch as chloroform does not readily spread on moist surfaces, a solvent of equal parts of chloroform and alcohol was tried, but this, too, proved too prone to undergo changes. Under different tariffs between Germany and our own country, and prevailing conditions, the cost cannot be compared; however, for Germany at present this 5-percent bromine-chloroform solution is considerably cheaper than the surgical iodine-alcohol solution. The bromine-solution must be protected from light.

Another possible solvent is carbon disulphide; but its stench and inflammability put it out of question. This leaves carbon tetrachloride to be considered; which the authors have lacked opportunity to try.

EXPERIMENTAL PROVING OF BROMINE-CHLOROFORM AS A GERMICIDE

The practical determination of the germicidal value of bromine-chloroform, as discussed in the foregoing paragraph, was worked out by Doctor Bonhoff, chief assistant surgeon of a German naval hospital-ship, who winds up his presentation (*loc. cit.*) with these words:

"Mercury bichloride is not a positively reliable disinfectant, and even may fail absolutely, especially where deep action is required. In 5-percent bromine-chloroform (as above), we possess an agent which, as in the case of iodine-tincture, when the skin merely was cleansed with benzin, is certain to render the skin absolutely germ-free, even in its deep layers. . . . . It is perfectly competent to replace tincture of iodine for disinfecting the skin and in the treatment of wounds. Nevertheless, it is not suggested

that it displace tincture of iodine, the excellent virtues of which can not be questioned, as long as not demanded by the economic situation."

A condition of use is, that water, particularly soap and water, be strictly avoided previous to cleansing the skin with benzin. The application of the solution causes a sense of coolness, but no smarting; it leaves the skin slightly yellow, which disappears within a day. Irritation never was observed. The urine in no instance exhibited albumin, casts or sugar.

It is needless here to repeat the details of the series of tests, suffice that they were exacting, and yielded results as follows, as between iodine (5 : 100), bromine (5: 100), and bichloride (1 : 1000), and with respect to virulent staphylococci, streptococci, and bacillus pyocyaneus, in pure cultures derived from phlegmons, abscesses, and otitis media:

Mercury bichloride absolutely did not penetrate to any depth, and none of the three germ-species were destroyed after *five* minutes. In the case both of iodine and of bromine, all the germs were completely annihilated at the expiration of *one* minute, even in the deep layers of the cuticle.

Finally, this critical test was instituted: Cultures of staphylococcus and of bacillus pyocyaneus were rubbed into human skin, then these areas were disinfected, some with the iodine- and some with the bromine-solution (bichloride was excluded, because of its proven ineffectiveness), and after, respectively, one minute and five minutes, scrapings from the infected areas were inoculated into agar nutrient. After twenty-four hours, absolutely no germs had developed in any of the culture-mediums; the skin areas showed no irritation.

Conclusion: iodine-tincture and bromine-chloroform, both of 5-percent strength, equally destroy the virulent germs in the skin absolutely within one minute.

FACTS ABOUT THE WOUNDED IN THE PRESENT WAR

Speaking about his observations from the standpoint of the German army, Richard Koch, head of a reserve hospital, says (*Ther. Monatsh.*, 1915, p. 175) that, if there were no tetanus (which is of too frequent occurrence, while the dysenteric attacks are mild), the low mortality would, indeed, be astounding. The number of wounded and sick treated in his hospital (not a field lazareth or a regular military hospital), he declared, has been enormous, and, yet, among these some had lesions that in times of peace would have been pronounced dangerous, including compound fractures, bullet-wounds of lung and skull, the latter with open purulent dura mater, pelvic penetrations, and innumerable badly infected flesh wounds; nevertheless, out of all these, only 2 died, exclusive of 10 dead from tetanus. Only a very few left the hospital crippled for life, the majority being capable of at least resuming garrison duty, a small percentage alone permanently reduced by more than 25 percent of their former earning-capacity.

It may be said, then, Doctor Koch opines, that, but for tetanus and barring injuries to vital organs, a war-wound today is almost devoid of danger; and this applies equally to lesions resulting from infantry and artillery missiles, even to dumdum bullets. Colleagues active in the field lazareths and regular military hospitals of course will dissent from this verdict, and justly so, for, none whose condition seems hopeless are sent to the interior, but are mercifully cared for in the rear of the firing-line until the end. But, the writer argues, this very fact that the transportable wounded almost invariably escape with their lives proves conclusively the relative harmlessness of modern war-wounds. And he adds that, on the whole, the wounds give but little pain, whimpering and groaning hardly ever being heard. In fact, the consumption of morphine is far less than in a civil hospital, this narcotic being displaced by a rational draining away of the wound secretions and the liberal use of fixating bandages. Besides, as is shown in another abstract from this same correspondent, this free employment of the camphorated wine (Pharm. Germ.) as a wound dressing also tends to lessen pain in a marked degree. In fine, these conditions obtaining—no epidemics, scarcely any deaths, hardly any pain felt—Doctor Koch declares, may truly and without exaggeration, be called marvelous.

THE BACTERICIDE ANTITETANIC TREATMENT OF WOUNDS

Dr. Richard Koch, the author quoted in the preceding item (*loc. cit.*), is of opinion that much greater advance in the prophylaxis of tetanus ought to be made. At any rate, in our present state of ignorance, virtually every wound, whether suspicious or not, should be followed by immediate serum injection—in any reasonable amount—for, as soon as a positive diagnosis of tetanus is

possible, this therapy no longer is of much importance. [Presumably reference here is to wounds of soldiers in the field.—ABSTR.] At least, the injections should be made upon the slightest suspicious signs in facial expression, halting speech, augmented reflexes, and so on. Scientific accuracy should be ignored.

Furthermore, because—and solely because—of tetanus danger, purely aseptic treatment of wounds must be reduced to the lowest minimum. The infected subject does not become tetanized because of his being infected with tetanus-bacilli, but because these anaërobic bacilli proliferate in his wound.

Experience has demonstrated that bactericidal dressings may not be made; however, the author is not convinced that agents capable of giving off oxygen, oxidizing necrotic tissues, do not exert a retarding influence upon the growth of the bacteria in the wound. Consequently, the consistant introduction of such an agent into every war-wound, from the very first to the end, might greatly reduce the viability of the organism; and to this end hydrogen-dioxide solution and potassium permanganate are suggested for trial.

A general systematic organized activity on these lines promises greater results, it is thought by Koch, than do the studies of the question concerning the relative antitetanic properties and faults of magnesium sulphate, chloral, morphine, and so on.

THE HYPOCHLORITE TREATMENT OF WOUND INFECTION

In the October number of CLINICAL MEDICINE (p. 950), we described the remarkable work being done in France by Carrel and Dakin, of the Rockefeller Institute, with an improved solution of calcium hypochlorite in the treatment of war-wounds. At that time we gave the details of the discovery made by these gentlemen (as also, independently, yet, simultaneously, by a group of Edinburg investigators), which in substance is, that by decomposing calcium hypochlorite with sodium carbonate and adding to the resulting solution some boric acid, an antiseptic solution is obtained which, while noncaustic and nonirritant, constitutes a powerful bactericide.

In *The British Medical Journal* for October 23, 1915, there appears an editorial abstract of Doctor Carrel's recent communication upon this subject, as presented to the French Academy of Medicine. Doctor Carrel has established the fact that all wounds inflicted by shells, mines or grenades are infected; this statement being supported by the results of extensive bacteriologic investigation.

As early as six hours after a wound is inflicted, bacteria can be found in it, although at this time they usually are present in only small numbers and mainly localized around the projectile or scraps of clothing. Within twenty-four hours, the number of these organisms becomes enormous. It is not alone desirable, but imperative, therefore, Doctor Carrel maintains, that the wound be cleared of the microbes as quickly as possible; and, looking at the matter from this standpoint, he vigorously repudiates the view that antiseptics are useless.

In the treatment now adopted by himself and his associates in France an effort is made to secure the penetration of the hypochlorite solution into the most remote recesses of every wound. The skin surrounding the wound should be disinfected with tincture of iodine at the first dressing-station; then the wound, if its aperture be small, is injected with the hypochlorite-solution; if large, covered with gauze wet with the same liquid.

At the ambulance- or clearing-station, all foreign bodies should be removed, the wound thoroughly cleaned, and any hemorrhage arrested. The wound should not, however, be mopped, brushed or curetted. The next step is, the thorough irrigation of the wound with the hypochlorite-solution, of 1-2-percent strength. This causes no irritation, even when regularly applied to the skin or tissues for several weeks in succession.

However, while the antiseptic action of this preparation is highly effective, it is of but short duration, since it is decomposed when it comes into contact with albuminous substances (blood-serum). Therefore, it must be renewed by frequent injections or by continuous irrigation. For the purpose of irrigation, Carrel uses india-rubber tubes about 6 mm. in diameter; each tube having a hole 1-2 cm. distant from one end, or several holes, as the nature of the wound may require. The wound is then covered with toweling, for the purpose of absorbing the flowing solution. In fracture-cases, the end of the tube is allowed to lie among the bone fragments.

At the first dressing, the wound is filled with the gauze, and the surgeon assures himself, by testing the tubes, that the liquid will come into contact with every part of the gauze. Over all, there is placed a layer of

nonabsorbent cotton. Every hour, or even every other hour, a sufficient quantity of the liquid is injected into the tubes, unless continuous irrigation can be arranged.

Under treatment of this character, Carrel asserts, the happiest results are obtained. In cases of fracture produced by fragments of shell, although infected, it was possible, under this treatment, to make them so thoroughly aseptic that recovery was as rapid and as complete as with simple fractures.

AN ANTISEPTIC IODINE-SOLUTION

H. W. Yemans (*Milit. Surg.*, June, 1915, p. 522) has used the following surgical antiseptic combination, to the exclusion of all others, during the past eight years:

Iodine	1
Potassium iodide	2
Salicylic acid	5
Alcohol (70-percent)	100

This solution may be applied undiluted for sterilizing the hands and site of operation, also for disinfecting wounds. For wet dressings and for irrigation, it should be diluted with water, so as to give an iodine content of 1 : 1000 to 1 : 5000. Diluted to 1 : 25,000, Yemans has used it in treating gonorrheal ophthalmia and for urethral irrigation. The solution does not injure instruments and may be used to sterilize them. It is not irritating when used in full strength for sterilizing the hands, provided they have not been previously subjected to violent scrubbing. Prior to application, the hands should be well dried. The discoloration of the skin, which it causes, soon disappears.

HOW LONG DOES VACCINATION PROTECT AGAINST SMALLPOX?

There is a widespread belief among the laity that vaccination protects "for seven years." Many physicians also have an erroneous opinion that, while there is nothing sacred in the "seven," any person who has been successfully vaccinated is fully protected against the disease for at least a considerable term of years.

It is not safe to be too dogmatic in statements of this kind. This is demonstrated by some investigations reported in *The Weekly Bulletin* of the Department of Health of the City of New York, in its issue of October 30, 1915. The editorial writer of this little publication states that the inspectors of the New York Department of Health occasionally meet with persons who can be revaccinated successfully at the end of six months, although the shortest period of immunity conferred by vaccination, in the actual experience of the department is nine months. However, medical literature mentions cases of even shorter duration, one of one and one-half months, one of four months, and one of six months. There seems to be a slight discrepancy in these statements; still, it is plain that the immunity conferred by vaccination at times is very evanescent.

Some statistical information is given that bears upon this point, which we find very interesting. For instance, Kitasato, in revaccinating persons vaccinated one year before, had 14 percent of successes; after five years, 50 percent of successes, and, after ten years, 89 percent of successes. The results obtained correspond closely with those obtained by Lescohier. Thus, one year after vaccination the latter reported success in 28 percent of the revaccinated; after five years, in 50 percent; after ten years, in 85 percent.

The *Bulletin* declares that vaccination will "take" in 99.9 percent of persons who have not been vaccinated before, provided the virus used is of high potency. Vaccinated persons become susceptible to revaccination before they become susceptible to smallpox. For instance, the experience of the New York Health Department is, that attendants who have been vaccinated from time to time, while nursing smallpox-patients, have had successful inoculations with the virus, despite the fact that they have remained immune to smallpox, although almost constantly exposed. The protection of vaccination against smallpox, therefore, undoubtedly is considerably greater than that indicated by the figures given.

The moral of these statistics, however, is, that every individual who is likely to be exposed to smallpox (and everyone is) should be vaccinated at frequent intervals. It would be a good rule to require revaccination every five years, especially during youth.

EMETINE IN DYSMENORRHEA

One reader of CLINICAL MEDICINE writes to inquire wickedly, whether "there is anything that emetine will *not* cure." Considering the variety of diseases for which this remarkable alkaloid has, in recent time, been advised, we do not wonder at our friend's levity. However, we are not inventing these claims—we simply present reports. and certainly a drug that is doing so much, and

promising so much, is worthy of most serious consideration.

And now for another new use. Dr. W. Beresford Robinson (*Practitioner*, Oct., 1915, p. 544) has been trying emetine in his cases of dysmenorrhea which did not respond to the usual remedies. Most of his patients had suffered from painful periods for many years. Now he has obtained good results from the emetine, although he found it desirable to give as high as 2-3 of a grain of the alkaloid daily. He begins with the drug on the day preceding the probable onset of the menses, and continues it during the first two or three days of the period. He has found that, if he injects, in the morning, a dose of only 1-2 grain, the effect wears off late at night, so that the pain returns.

Most of his patients were of the usual type in which one meets with this condition, that is, toxic patients, unmarried, often constipated, most of them dark-skinned, and having cold extremities and a dull facial expression. "Naturally, the emetine does not cure the condition," Doctor Robinson warns; "still, to my mind, it alleviates it better than any other method I know of, without being in the slightest degree a depressant."

EMETINE IN MUCOUS COLITIS

In his paper in *The Practitioner*, referred to in the preceding abstract, Dr. W. Beresford Robinson tells of his employment of emetine hydrochloride in a very severe case of mucous colitis of two years' standing. The patient, a woman, was passing mucus mixed with blood, and suffered greatly from abdominal pains, had severe headaches, and during menstrual periods was in agony, which was relieved only by means of morphine. Every ordinary drug had been tried for the relief of her condition, but all had failed. The patient's pulse was feeble and rapid (120), and she was confined to her bed, utterly prostrated, the least exertion leading to fainting-attacks.

In December, Doctor Robinson began with the emetine, injecting 1-2 grain daily. Within a week, all hemorrhage had stopped and there was less mucus than at any time during the entire illness. The pulse improved in strength and volume, and the pain was greatly lessened. The following menstrual periods practically were painless. In six weeks, the patient was able to walk about a little and could enjoy a drive. Except for a brief setback, caused by an intercurrent influenza, this woman has continued to improve.

In this instance, Doctor Robinson declares, the emetine had a soothing effect upon the bowel that was truly miraculous. It is his purpose to try it, in small doses, in the treatment of some cases of summer-diarrhea of children.

EMETINE HYDROCHLORIDE IN PHTHISIS

After having prescribed emetine hydrochloride for some time, W. Beresford Robinson (*Practitioner*, London, Oct., 1915, p. 544) makes the statement that he is convinced that this alkaloid "occupies a very useful place in everyday medicine." The sole objection to its use, in the view of Doctor Robinson, is, the "moderate amount of local tenderness following subcutaneous or intramuscular injections." It must be given hypodermically, he continues, because, when given by mouth, it causes vomiting; or, administered per rectum, it produces tenesmus and diarrhea. However, the local reaction is not sufficiently painful to preclude its daily use over long periods of time, provided one varies the point of injection in the arms and alternates the arms from day to day. Doctor Robinson has observed no depressing effects, while the pulse is slowed and strengthened.

Doctor Robinson has tried emetine in several cases of phthisis, to check hemorrhage. He has found it uniformly successful, controlling the hemorrhage completely in about three days. Not only does the emetine arrest the loss of blood from the lungs, but in some unexplained way it seems to cause improvement in the health of the patient.

For instance, Robinson describes his experience with a man of 30 years who developed extensive phthisis, and which progressed with appalling rapidity. In ten days from the first onset, the patient became utterly prostrated, with physical signs of the disease over both lungs. There was severe and copious hemorrhage, which he was unable to control with the customary remedies. Doctor Robinson thereupon began the administration of emetine, giving it at first in 1-3-grain doses daily for three days. On the fifth day, as the hemorrhage had entirely ceased, he discontinued its use. Bleeding recurred on the seventh day, whereupon the emetine injections were resumed, the drug being given in larger doses. It was injected daily for a week, then on alternate days during the second week, and then only occasionally during the following fortnight. There occurred no more hemorrhages. The patient

thenceforth improved steadily, and was sent to a sanatorium, since which time he has become very much better.

Doctor Robinson tells of several other cases of hemoptysis cured with this alkaloid.

SIR WILLIAM OSLER'S GRACEFUL TRIBUTE TO THE DEAD EHRLICH

In Sir William Osler's scholarly address upon "Science and War," lately delivered at the University of Leeds Medical School, much was said about the contributions of science to the destructive forces of men. The paper, as a whole, should be read by every American medical man. (See *The Lancet*, Oct. 9, 1915, p. 795.) We particularly wish to call attention to Sir William's fine tribute to that illustrious German scholar, recently deceased, Paul Ehrlich. This tribute is the more notable, because it comes from a patriotic British citizen. He spoke as follows:

"It was a noble motive that prompted the Warden and Fellows of New College to put upon the roll of honor in their hall the name of a German Rhodes scholar, one of her sons, though an enemy—who had fallen in battle for his country—an action resented by certain narrow-minded Philistines in the press. I should like to pay a last tribute of words to Paul Ehrlich, one of the masters of science, who has recently passed away. Many will recall with pleasure his outstanding position at the last International Congress of Medicine. In microbiology and in the biochemistry of cells, he was a creator, and no one of his generation contributed so much to our knowledge of the relations of living matter and chemical compounds. His studies on immunity form a new chapter in pathology. The climax of many years of patient work on the specific affinities of chemical substances for certain cells and for protozoa was reached in the discovery of '606' as a cure for syphilis. The brilliant labors of such a man transcend national limitations, and his name will go down to posterity with those of his countrymen, Virchow and Koch, as one of the creators of modern pathology."

THE ACTION OF ADRENALIN IN GASTRIC CRISES

Readers of CLINICAL MEDICINE will recall references in this journal to the influence of betaimidazolylethylamin upon the etiology of urticaria and asthma (see CLINICAL MEDICINE, Aug., 1914, p. 712, and Sept., 1914, p. 799). In these numbers, we reported the experience of Allan Eustis, who, in following out some studies made in von Noorden's clinic at Vienna, became convinced that urticaria frequently is of gastrointestinal origin, being caused by betaimidazolylethylamin; the latter a result of the decomposition of histidin, one of the amino acids formed during the normal pancreatic digestion of protein.

Eustis showed that rebellious urticaria can be cured by two weeks' abstention from albuminous food; also that the symptoms of the acute attack can be relieved by means of injections of adrenalin.

Dr. Bayard Holmes, in a paper contributed to *The Lancet-Clinic* (Oct. 30, 1915, p. 392), gives his experience with some cases observed in the Cook County Hospital, Chicago, which led him to the conclusion that there is some relation between the pain of gastric crises in tabes and the presence of betaiminazolylethylamin in the body. A further clinical study uncovered the interesting fact that these gastric crises can be relieved with injections of adrenalin, the same as in the case of urticaria. Moreover, he shows that, in some cases at least—possibly in all—these *adrenalin injections are followed immediately by a fall of the blood pressure.* This certainly is most remarkable, for, under ordinary circumstances, adrenalin, when administered intramuscularly to healthy men or intravenously to large dogs, raises the blood pressure, from 40, to 80 mm.

Not only, however, is this discovery, that the pain of gastric crises is relieved (even if but temporarily) by adrenalin, of considerable therapeutic importance, but, as Holmes points out, "should this reaction be found uniform, it will be a valuable means of diagnosis when a surgical operation for the relief of the pain is contemplated."

Another decidedly interesting observation made by Doctor Holmes in this connection is, that the bodily reaction to adrenalin, in cases of gastric crises, is similar to that produced by the same drug in dementia-præcox subjects. He ventures to suggest that this fact provides a basis for further research into the etiology of the latter disease.

It may be added that the similarity of therapeutic results in cases of urticaria, which has been demonstrated, by Eppinger, von Noorden, and others, to be dependent, at least sometimes, upon intestinal intoxication with betaimidazolylethylamin, should warrant a further study of the blood-pressure conditions in urticaria and in asthma, in order to determine what reaction to adrenalin medication occurs in those two disorders.

Miscellaneous Articles

How Do I Collect?

IT WAS my intention to continue these papers under the heading of "My Best Collection Letter," but after a personal canvass of several hundred men in the field and a careful study of the material obtained I have come to the same conclusion as did our farmer friend when he first made acquaintance with a giraffe—"There ain't no sich animal." I have, however, received some very interesting letters on the subject of making collections, many of which raise some very pertinent points; and these should form the basis of a very interesting general discussion of the subject.

The average practitioner, it seems, collects between 90 and 95 percent of his outstanding accounts. Some few of those expressing themselves confessed to a considerably lower percentage, while quite a number declared they collected more than 95 percent. This would seem to indicate that the doctor, even though he may be made to wait until the butcher, the baker, the grocer, and the movie-palace have had their share of his client's earnings, ultimately loses not more than do the tradespeople of the class mentioned. This probably is owing to the fact that people recognize a greater moral obligation to the doctor and hold themselves in honor bound to pay—ultimately.

The methods employed in making collections—outside of writing letters—appear to be, in the order of their most frequent use, first, monthly statements; second, making personal calls; and, lastly, the taking of notes at the completion of the service. A surprisingly large number of doctors have informed me that they never use collection-letters, relying entirely merely upon rendering statements of account. This seems to me an unsatisfactory condition.

The question now seems to be: Can we, by closer organization, mutual cooperation, and more businesslike methods, increase the general average of accounts collected to more than 95 percent? Let's see whether the answer and the means do not lie in the letters, forms, methods, and the like, herewith presented.

How Do I Collect?

The following letter was written by Dr. J. F. Roemer, of Waukegan, Illinois:

I have on hand a large number of printed stock letters, but go on the basis of the old darkey—"We never send bills to gentlemen."

The question arose, Suppose I forget and do not pay my bill?

His reply was, "Then you cease to be a gentleman and we immediately send you a bill."

I select my stock letter to fit the individual case, and keep right after the account, using the means and methods most suitable for that particular debtor.

In the first place, I aim to do good work. If I do not know what is wrong, I say so and advise my patient to go at once to a specialist. Then I get busy and learn all about that disease, for the next occasion. In a general practice, we cannot be adept at all things, but must know what really needs to be done, then get a man to do it for you—and for the patient.

That kind of dealing makes friends and gives confidence. I find that people will pay for that kind of work cheerfully, but do not like to pay where they feel that they did not get good value for their money.

In other words—deliver the goods to the satisfaction of the interested party, and he will respond in like manner to the best of his ability.

Doctor Roemer's statements and forms follow as nearly in the order of their use can be determined:

In Account With

DR. J. F. ROEMER

.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Early Settlements Make Long Friends

I Have Adopted the Plan of Sending Statements Every Three Months for Three Reasons:

1. Because the business world allows thirty to ninety days time to those with approved credit. Most bills are due in thirty days.

2. Because my expenses require that I be a little more methodical in regard to my collections to keep my own credit good.

3. That you may compare your memorandum of account with mine, and if there be a difference, it can be adjusted while fresh in both our minds.

Do not construe this to be a dun. It is merely a statement of account—a request for money only when past due—ninety days. Where necessary, we will try to make arrangements for a more convenient time.

For a doctor to buy the necessary office apparatus, books, drugs, and other equipment, to render services of the highest efficiency, requires the expenditure of a great deal of money.

The nature of my business necessitates a great many small accounts, which in the aggregate, amount to quite a sum. So if you can spare the above amount, it will greatly convenience and oblige. You appreciate prompt service; we appreciate prompt pay.

Dear Sir: I am sending statement of accounts to date to all of my patrons. Please see yours inclosed. This is an opportune time to attend to such matters. This is the closing month of the year, and we all want to close the year right. Christmas is coming, and we all want to enjoy this festive season, and we will all be happier if we can look the world squarely in the face and say, "I owe no man."

The approaching holiday season is a time when we all want to "read our title clear," and we can't do it with debts hanging over our heads. This is not a dun, but only a gentle reminder, and a hint as to how to be happy and make others happy. If all will kindly act promptly upon this suggestion, everybody will be happy.

Yours very sincerely,

Dear Friend: One week ago I mailed you a polite note, inclosing my account with you to date. I hope you found it correct. If there is any question, please call at your earliest convenience and we will consider the matter together. Nearly all my patrons responded promptly to my first note, and I am disappointed that I have neither seen nor heard from you. Possibly it was not convenient for you to call. I trust that I may see or hear from you during the present week, for I have some financial engagements to meet, and will need all my resources.

Yours for a Merry Christmas,

Dear Mr......: I have written you twice recently concerning your account with me, but, strange to say, I have heard nothing from you. Suppose I should treat you in such a way when you are sick—what would you think of it? However, I will be charitable with you, and will conclude that you have been too busy—or perhaps you have been saving up the amount to bring to me in a few days. I assure you that it will be very welcome, for doctors have more expenses to meet than most other people.

After settling this account you will feel better—you will feel easier in mind, and that will make you feel better in body. You will also know that when you or any of your family get sick, you can get prompt and willing attendance. This in itself is worth much.

Confidently expecting to see or hear from you soon, I am,

Yours for a Square Deal,

Dear Mr......: This is my fourth letter to you about that little business matter. You have disappointed me sorely. But Christmas is nearly here, and maybe you are planning to surprise me on that day by calling and settling your account. If so, you will make it a happy day for both of us. I will expect to see you then, if not before.

Yours for a clear conscience on Christmas Day,

Dear Sir: You have disappointed me all this month; and your failure to call and settle on Christmas was a very great disappointment. Now the question is, will you also disappoint me on New Year's Day? Will you begin the New Year owing this bill? I hope not—I think not. I think that you are beginning to realize your duty in the matter. I am going to trust you again; and I am going to hope and believe that you will not begin the New Year with this just debt hanging over your head.

Yours for another trial,

Being greatly in need of money right now, it is found necessary to collect in some ready cash, and this request is being made of you along with other debtors. What you can do in the way of assistance at the earliest possible date will be highly appreciated. Please do what you can and oblige,

Yours truly,

Dear Sir:

According to my books you are indebted to me to the amount of $....., which please call and settle at once, or make satisfactory arrangements for the payment of same. I do not wish to make you any costs, but if you compel me to, it will be your own fault, and not mine.

I owe you no ill will and ask nothing more of you than my creditors ask of me.

Respectfully yours,

Dear Sir:

I have repeatedly asked you to call and settle your account, but have heard nothing from you. No doubt you are aware that the principal merchants and leading professionals have a protective union, and in conformity with its laws, are compelled to report the names of those who refuse to pay their just debts. As our business relations in the past have been pleasant, I am disinclined to report your name and account to such outside parties, whose methods of collecting are through disreputable agencies that would give you much annoyance and double your indebtedness.

Please appreciate my desire to treat you fairly and honorably, and delay payment of this account no longer.

Respectfully yours,

P. S.—If I owed you, what would you want me to do?

Form 1.

THE CLAIM ADJUSTMENT AGENCY,

This Agency is established to afford protection in giving credit and is a safeguard against those who contract debts and can but will not pay.

Our subscribers are furnished with a list of parties whose accounts are advertised for sale, and each subscriber will refuse credit to anyone whose account appears in such lists until settlement of claims against them have been made and noted by this Agency.

Dear Sir:

Not wanting to put you to the expense or inconvenience by placing your unsettled account, amounting to $.....in the hands of the above Agency, we send you this notification in order to give you an opportunity to adjust it with us. Should you fail to attend to this within .....days, we shall feel justified in placing it in their hands, with instructions to collect it in their system.

Hoping to hear from you within the time specified, we are,

Yours truly,

Form 2.

THE CLAIM ADJUSTMENT AGENCY,

This Agency is established to afford protection in giving credit and is a safeguard against those who contract debts and can but will not pay.

Our subscribers are furnished with a list of parties whose accounts are advertised for sale, and each subscriber will refuse credit to anyone whose account appears in such lists until settlement of claims against them have been made and noted by this Agency.

Dear Sir:

We notified you by a courteous letter on the .....day of.....that our account against you amounting to $.....was past due, and gave you.....days to reply. Your silence would indicate a disposition on your part to evade the payment of an honest debt, and we shall regret being forced by your negligence to place your account in the hands of the above Agency for adjustment, but unless you remit us within.....days from date hereof or make satisfactory settlement, we shall be compelled to do so.

Yours truly,

The next letter was submitted by the wife of a doctor—Mrs. M. F. Woodard, of Bloomingdale, Indiana, under the heading of

As Seen by a Doctor's Wife

"We do not usually think of the physician as being a good business man, especially in the matter of collecting accounts due him. I once read of a man who had made a failure in business and therefore decided that, as he did not have good business ability, he would study to become a doctor. Nevertheless, we believe that every physician ought to be enough of a business man to see to it that he gets his pay for services rendered. Not but that he may do some charity work; not, however, to such an extent as to cripple him in meeting his obligations or supporting his family creditably.

"In our own little town, the merchants are placing their business upon a cash basis, the coal-dealers are doing the same, and, in fact, all men of every occupation expect their pay immediately upon the delivery of the goods or the completion of their services. *All* men, I say, except the doctor. He, it seems, must wait an indefinite length of time, or run the risk of giving offense if he indicates a preference for prompt pay. I speak especially of the general practitioner who has the small town and vicinity as his particular territory. And sometimes this limited field is shared by two or three competitors. At one time, not long ago, there were four regular practicing physicians and, in addition, a chiropractor in our little village of 600 population, and I am somewhat of the impression that the chiropractor did the biggest cash business of the five individuals there engaged in the art of healing.

"In the successful handling of collections, extremes are to be avoided, as in everything else. To manifest any embarrassment or timidity in approaching a debtor regarding his account, is quite as bad as to be disrespectful or overzealous. In the first instance, one may lose the account; in the second, the patient. As Doctor Hawley, of Wisconsis, correctly says: 'I am willing that my patients should become angry at me, if it cannot be avoided, but I never allow them to lose respect for me.'

"I wish the splendid articles of A. D. Brush, entitled 'The Keystone of Success,' which appeared in the May and June numbers of CLINICAL MEDICINE, could be read and applied by every physician in the country. One of the things that he mentioned which ought to be adopted everywhere is, for a county medical society to prepare its own list of poor-pays, the information being furnished by the doctors of the county, for mutual protection. Then, if the doctors will avail themselves of the advantage which this information affords and be loyal to one another, it will soon stop patients of this type dodging from one doctor to the other, in an effort to avoid paying their bills.

"We here have the poor-pays pretty well marked and, as the wife of a physician, I find that opportunities come to me frequently for getting the money out of this class if they persist in patronizing the Doctor. Not long ago, one of this class sent her grandson to the house for a bottle of medicine, saying that she would call for it at the office. I sent back word, that she bring the money when she called for the medicine. The money did come all right—although her feelings were somewhat ruffled. At another time, a woman

called up, over the telephone, for some medicine. I asked her when her husband was expecting to see the Doctor at his office. She replied that she didn't know, and wanted to know, why. I answered, 'To settle the balance owing, according to promise.' She didn't say anything more about getting medicine for two or three days; when she did, the money was forthcoming. However, she had tried in the meantime to get the medicine from another physician but had been refused. At still another time, when a call came to the house for the Doctor, I sent word that he could not call. They immediately took the hint, and the debt of long standing was paid.

"For the most part, our patients belong to the good-paying class, although some of them do not find it convenient to offer much cash, having either to work it out or trade in coal or produce. Sometimes we get our milk, butter, eggs, and groceries in this way. I have adopted the plan of sending statements once a month or making out a list for my husband to see. By working together in this way, we have secured much better results than formerly."

A. D. BRUSH.

Chicago, Ill.

ALESSANDRINI'S SILICIGENOUS THEORY OF THE ETIOLOGY OF PELLAGRA

Some time ago, there was presented in these pages (1914, p. 1129) Professor Alessandrini's (the Italian investigator) theory of the causation of that puzzling malady pellagra; the principle set forth being, that certain drinking-waters contain colloidal silica, and that this silicic acid tends to prevent the elimination of certain salts, with the consequence of an excessive generation of mineral acid in the tissues. The ingestion of basic sodium citrate is proposed as the remedy, while the water must be abandoned. From our foreign exchanges we learn that, in association with A. Scala, Giulio Alessandrini has embodied this matter in a book of 176 pages, with 8 plates, published at Rome.

THE VALUE OF PROMPT COLLECTIONS

The business of a doctor is peculiar, in that it is always personal. Unlike men in mercantile lines, the professional man cannot delegate his work to others, but must do it himself. The doctor cannot send his bookkeeper or clerk. This means that when he is busy he is very busy and has no time for books or accounts. Often it happens that the more practice a doctor has the less money he gets in, relatively. He is giving conscientious attention, day and night, to his patients, and his books are neglected, accounts are multiplying and growing larger, and he finally wakens to the fact that he needs money, that irresponsible names have crept into his books, that those who can pay do not do so.

Meanwhile overhead expense not only has kept up, but increased. The automobile must be kept in running order or wornout horses replaced. Books, journals, medicines, and instruments must be bought and all the other expense incident to a growing practice provided for. An outlay in many directions, but only one source of income.

Here is where the doctor needs help, either through efforts from his own office or from someone who is able to give him satisfactory service. By taking up the collection of accounts promptly, they can be prevented running an indefinite time. The doctor puts in full hours for every charge he makes on his ledger, and he should have the use of the money he has worked hard to earn.

Again, unless debtors are made to pay their bills, they have a way of thinking (and expressing their thoughts, too) that the services rendered were of doubtful value; that treatment was not first-class, or else the doctor would insist upon his pay. This is always the attitude assumed by a man who intends to beat his bill; sometimes, indeed, he even talks about malpractice. The longer the bill has run, the more likely is he to attempt justification of his delinquency, sometimes going to ridiculous extremes in inventing reasons for nonpayment.

The average doctor, unfortunately in some instances and through stress of circumstances in others, spends all the money he takes in, and what he puts on his books he figures as having saved. In this way, the inexperienced man can for a time build palaces fairer than dreams. With substantial sums charged up against apparently well to do debtors, he has no fear of the future, for, in emergency he can call for settlement and the money will be there. Meanwhile he figures, again falsely, that he is doing his patients a kindness, showing real consideration, in fact, by not presenting their bills; forgetting that the longer he waits the more insecure becomes his hold upon them, while ignoring the business maxim that sharp collections hold customers best.

I once called, several years ago, upon a doctor in a prosperous Ohio city. It was not a small city and the doctor in question had a

practice that was largely among the most responsible people in town. His income was large and his clientele choice. He seldom lost any money in bad accounts, yet was obliged to wait indefinitely in a majority of cases for his fees. He had educated his patients wrongly from the start. Illustrating the conditions he had to contend with, he related to me some personal experiences in making collections. Perhaps it would be more proper to say, in "trying" to make collections.

It seems that the doctor had been summoned to New York, and, although able to check against a good bank balance at any time, he very naturally conceived the idea that it would be a good time to get in some money. Therefore, before departing on the evening train, he determined to use part of the day for that purpose. He took with him about $2000-worth in statements, so he said, against the "best people" in town.

"How much did I get in that day?" he queried of me.

Thinking to let him down easy, I said: "O, about a hundred dollars."

"I collected just seventeen dollars," he said. "Seventeen dollars! And the best people in town! Two thousand dollars in good bills, and I collected not quite 1 percent. And every debtor I called upon was in."

Pressed to relate his experiences in detail, he said to me:

"My first call was upon a wholesale grocer. His greeting was most cordial. 'Why, hello, Doctor, we don't often see you over here. What can we do for you? Have a cigar. Oh, Emily's bill. That's for the typhoid case. I'll take it right home tonight and have my wife check it over. Glad you came in. Call again.'

"My next call was at the office of the gas company, where I received the same cheerful welcome from the president. 'I'll write the hospital to send in their bill, so I can pay them both at once. You'll hear from me about the first of the month.'

"The next call was on a railroad official, who promised to have his secretary mail me a check."

Here is the concrete experience of a man with good accounts to collect, accounts against solvent and responsible debtors, and I might add that this particular doctor for several years past had been sending out statements with the same regularity as his wholesale grocer friend and the gas company, and we all know how prompt they are in presenting bills and following them up when payment is delayed.

The other kind of debtor, the naturally poor-pay kind—the professional delinquent—did you ever diagnose his financial health, doctor? Ever find sclerosis of his money arteries? Ever make microscopic examination of his "habit of pay" and find it swarming with bacilli that neutralize his normally good impulses? Ever notice a cirrhotic degeneration of his pocketbook? This is a chronic condition that resists almost any known treatment. Doctor, your blood will reach 99 Fahrenheit and go on upward until syncope sets in if you wait for this class of parasites to settle their bills.

C. B. POTTER.

Chicago, Ill.

RECENT RULINGS UNDER THE HARRISON ANTINARCOTIC LAW

In the March 11, 1915, number of *Treasury Decisions*, issued by the Treasury Department of the United States, there was published a complete résumé of the various rulings relative to the manner of enforcing the Harrison Antinarcotic Law. All these rulings have been published in previous numbers of CLINICAL MEDICINE and need not be repeated here; while anyone who wishes to familiarize himself with them will find an excellent epitome in the Federal Narcotic Record Book published by The Abbott Laboratories. Since March 11, 1915, however, new regulations have been put into force from time to time; but all of these, we believe, have been reproduced in the pages of this journal. Still, because of the importance of some of these decisions, and at the request of some of our subscribers, we reprint herewith a résumé of some of the most important ones; as follows:

Synthetic Substitutes for Cocaine or Alpha and Beta Eucaine.—Section 6 of the Law especially excludes from any exemption "preparations which contain cocaine, or any of its salts, or alpha or beta eucaine, or any of their salts, or any synthetic substitute for them." At first the Treasury Department ruled that preparations such as novocain, stovaine, alypin, and the like would not be construed as coming within the purview of the law. In T. D. 2194 (see *Treasury Decisions* for April 29, 1915), it was ruled that any "artificial substance or preparation which is or may be substituted for cocaine, alpha or beta eucaine, or any of their salts as ordinarily prescribed or used," should be construed as coming within the operation of the law. Therefore, novocain, stovaine, alypin, orthoform, and all similar substances must be ordered on the regular narcotic-blanks and dispensed or prescribed under the same restrictions as cocaine.

Quantity of Narcotic That May Be Dispensed or Prescribed.—In T. D. 2200 (see *Treasury Decisions* for May 20, 1915, p. 33), it was decided that when

a physician, dentist or veterinarian prescribes any of the narcotic drugs affected by the Federal Law "in a quantity more than is apparently necessary to meet the immediate needs of a patient in the ordinary case, or where it is for the treatment of an addict or habitué to effect a cure, or for a patient suffering from an incurable or chronic disease, such physician, dentist, or veterinary surgeon should indicate on the prescription the purpose for which the unusual quantity of the drug so prescribed is to be used. In cases of treatment of addicts, these prescriptions should show the good faith of the physician in the legitimate practice of his profession by a decreasing dosage or reduction of the quantity prescribed from time to time, while, on the other hand, in cases of chronic or incurable diseases, such prescriptions might show an ascending dosage or increased quantity. Registered dealers filling such prescriptions should assure themselves that the drugs are prescribed in good faith for the purpose indicated thereon, and, if there is reason to suspect that the prescriptions are written for the purpose of evading the intentions of the law, such dealers should refuse to fill the same."

No Exemptions for Prescriptions of Narcotic Drugs.—In T. D. 2213 (see *Treasury Decisions*, June 17, 1915, p. 81), it was ruled that the exemptions in Section 6 of the Act (in which it was declared that "preparations" and "remedies" containing minimal quantities of opium and its alkaloids are not affected by the law) should not apply to prescriptions written by registered physicians, dentists, and veterinarians. Under this ruling, every prescription calling for a narcotic drug, no matter how small the quantity prescribed, must conform to the requirements of the law and the regulations thereon. In other words, every such prescription must have indicated thereon the name and address of the patient, the date, the name and address of the physician, and his registry number. Such prescriptions may not be refilled, and must be filed by the druggist for a period of two years.

Lost Narcotic Order Forms.—In T. D. 2230 (see *Treasury Decisions*, August 5, 1915, p. 33), it is ruled that "in event an official narcotic-order form is lost between the time it is received by a registered dealer's representative, or is deposited in the mails, and the time it should have reached their office, the person writing such order will be required to make out a new official order form, attaching an affidavit to the duplicate of the first order, stating that the goods were not received, on account of loss of the order in transit, such affidavit being made upon receipt of notice from the registered dealer, and, if the first order subsequently turns up at the office of the registered dealer, it should be returned to the person who made it, marked across the face 'Not accepted,' and should be attached to its duplicate and the affidavit already on file explaining the reason for its not being honored."

When Narcotics Not Ordered are Accidentally or Unintentionally Shipped to a Customer.—In a ruling not yet published, it is declared that, where narcotics not ordered are accidentally or unintentionally shipped to a customer, it will be necessary for the person receiving such drugs to notify the manufacturer immediately, giving a list of the kinds and quantity of drugs received in error, and await the receipt of an official order form from the manufacturer before he is at liberty to return the goods; a copy of the letter of notification being attached to the inventory in the possession of the receiver, to protect him in event an inspecting officer visits his place of business and discovers the excess of narcotic drugs in his possession.

Eligibility of Osteopaths for Narcotic Registration.—In T. D. 2232 (see *Treasury Decisions* for August 5, 1915, p. 35), the following ruling was made: "Osteopaths should be permitted to register and pay special tax under the provisions of the act of December 17, 1914, provided they are registered as physicians or practitioners under the laws of the State and the affidavit is made in application for registration on Form 678, as required by T. D. 2215 of June 10, 1915."

Narcotic Dosage Required on Order Blank.—The following very important ruling, which we desire particularly to call to the attention of our readers, appears in *Treasury Decisions* for September 30, 1915, page 25, to wit, T. D. 2244: "In entering items calling for narcotic preparations and remedies on the order form issued in accordance with the provisions of Section 2 of the act of December 17, 1914, the quantity of narcotic drug to the ounce must be indicated, or, if ordered in tablet form, the total number of tablets and the quantity in grains per tablet should be stated."

The enforcement of this decision has been delayed until January 1, 1916. However, we strongly urge our readers to conform to this regulation at once, so as to "get the habit."

Method of Signing Narcotic Order Forms.—The following regulation (T. D. 2244) was published in *Treasury Decisions* for September 30, 1915, page 25: "The signing of narcotic-order forms with a firm-name, with no other name to indicate who wrote the order, will not be permitted. The name of the principal officer of a firm, corporation, partnership, or company, or the person who is granted, through power of attorney, authority to sign such orders must invariably appear thereon, and druggists and dealers are cautioned against filling such orders unless these requirements are complied with. Stamps or printed signatures on order forms are not permitted, and in every instance there must be an indication of individual responsibility in the preparing and signing of these forms."

In a later ruling, not published in *Treasury Decisions* at the date of writing, it is further added that in the case of branch establishments the name of the corporation, together with the signature of the manager, should appear immediately below. It is also ruled that the signature of any one of a number of different employees or officers of a large corporation will not be permitted, unless a power of attorney is filed with the Collector of Internal Revenue. "If the principal officer of a corporation is unable, through sickness, absence, or press of business to sign official order forms and wishes to delegate this power to some other officer or employee, a power of attorney must be filed with the Collector, designating the person so empowered."

This list of regulations includes, we believe, all those of special interest to the medical profession issued since March 11, 1915. However, difficulties are constantly arising as a result of misunderstandings of the meaning of the law or ignorance as to its exact requirements. If any of our readers are meeting with difficulties of interpretation

and will communicate with us, we shall be glad to give them any help we can.

In previous numbers of CLINICAL MEDICINE, we have urged our readers to make records, in their Narcotic Record Books, of all narcotic drugs which they might dispense, paying no attention whatever to the exemptions provided by the law. By so doing, they will be "playing safe" in every instance.

Practically the only dangers to physicians in the use of narcotics come from (1) failure to keep records, or (2) from dispensing or prescribing unusual quantities of the narcotic drugs, especially in the treatment of addicts.

To play doubly safe when handling the last-named type of patients, we would strongly advise that patients of this class be seen in consultation with other physicians, unless they are treated in hospitals or other institutions.

Once more we want to say that there is no reason why any physician should fear to use the narcotic drugs just as he always has prescribed or dispensed them, provided he keeps the preceding simple points in mind. Whenever it is a physician's duty to relieve pain, he should do so with the best remedies available.

We know it is not the intention of the Treasury Department to interfere in the practice of any practitioner doing a straightforward, honorable business. It is only the crooks who need to be alarmed. Nevertheless, honest men should be careful.

PELLAGRA, AND ITS TREATMENT

So much has been written about pellagra, its etiology, pathology, diagnosis, and treatment, that it seems almost unwise to suggest anything new relative to its possible cause and its treatment. Yet, in the face of this, it remains the duty of everyone who has treated pellagra victims successfully to make public his views.

Until four years ago, I had not seen a case of socalled "pellagra," but in the first case I encountered, my diagnosis was confirmed by a well-recognized physician of our city; after which I treated the case, and then three others in one family. All of them are well today, with no sign of currence. In each case I observed Riggs' disease, or pyorrhea, with all the concomitant symptoms of pellagra. When the pellagra disappeared, the pyorrhea was cured, too.

Various writers have reported that when treating pyorrhea with emetine, the coexisting skin trouble (such as psoriasis or eczema) seemed to disappear also. The reverse is true for pellagra.

Therefore, I am led to believe that the ameba of pyorrhea is at least a contributory cause in pellagra; that the outward symptoms are a manifestation of an internal condition; just as the typhoid bacilli, located in Peyer's glands of the bowels, produce all the outward, local, as well as the constitutional disturbances so characteristic of the disease.

Some writers contend that the disease is caused by insufficient and improper food, and that abundant and proper food will cure it; others claim that certain kinds of food will cause it, while other foods will cure it. These various views were reviewed at length at the triennial conference of the National Association for the Study of Pellagra, held in October at Columbia, South Carolina; but no definite conclusions were arrived at.

Thousands of people go on suffering from pellagra, especially here in the South, and mostly in country districts where the people generally subsist on a varied diet, more so than people in the cities. This hardly comports with the onesided-diet idea and does not appeal to me as a rational explanation.

Thirty years of practice has taught me to do something or quit and acknowledge failure. This condition has been with us long enough to be corralled and conquered at last; and my way of treating it is very simple, as you will see. I observed that all pellagra patients coming under my care had pyorrhea, so I reasoned that the ameba might poison the whole system, producing anorexia, diarrhea, dysentery, skin eruptions, spasms, toxemia, delirium and death (as I saw in one patient not under my care). Then I instituted the following treatment: A teaspoonful of ecthol (containing echinacea, and thuja, in aromatic elixir) in water before each meal. Also, I give half a teaspoonful of salugen (composed of zinc phenolosulphonate, beta-naphthol, menthol, thymol, myrrh, and hydrastis, with aromatic base) in water after each meal. I bathe the affected parts with the same mixture, undiluted, to relieve itching and burning.

Where the pyorrhea is marked, I use, hypodermically, emetine hydrochloride, a 1-2-grain ampule, every day for three days, then every other day for three days. The patient shows signs of improvement almost at once. One course of emetine, as stated, is all that I find necessary. Within thirty

days, the patient seems about well; still, I continue the other remedies for sixty to ninety days, for fear of relapse the following season, although I have had none so far. While my experience with emetine is limited, I shall continue to use it in connection with the other treatment, and feel confident of securing good results.

GEORGE W. BASS.

Knoxville, Tenn.

EMETINE IN TYPHOID FEVER: A FAILURE IN THIS CASE

When I read about the remarkable results of emetine hydrochloride in typhoid fever, as reported by Dr. W. L. Frazier on page 453 of the May edition of CLINICAL MEDICINE, as also the reports of its hemostatic power in hemorrhages, praised in other issues, you may be sure I made a mental note of it as being the proper "dope" for my next typhoid-case. And now I want to submit my experience with that first case.

On September 2 last, I was called to a sick man, but at the time was unable to diagnose more than gastrointestinal irritation. The next day he notified me that he was much improved. The following day he was in bed most of the time. On September 5, I was called again, when I found his temperature to be 102.8 F., and I diagnosed typhoid fever. The services of a good trained nurse were obtained on September 7, and in the evening 1-2 grain of emetine hydrochloride was given hypodermically. This treatment was continued night and morning. The patient showed a steady evening-temperature of 103 degrees or more until the evening of September 16, at which time the hypodermics were discontinued.

On September 30, the 28th day of the disease, the morning-temperature reached the normal point for the first time and lysis set in. At 2:30 p. m. on October 4, the bed-pan was used, when a full pint of clear blood passed, and at 5:30 p. m. about half as much more, with some of darker color, which evidently had been oozing. Once, a few hours later, he had a dark passage, but after that no more signs of hemorrhage.

Of course, the sulphocarbolates and other proper treatment was carried on at the same time with the emetine.

We get plenty of reports of successes, but this shows a little of the other side.

I used the emetine in four other cases. One patient, I felt, was greatly benefited, two somewhat so, and the other showed no apparent results.

GAYLORD MCCOY.

Joliet, Mont.

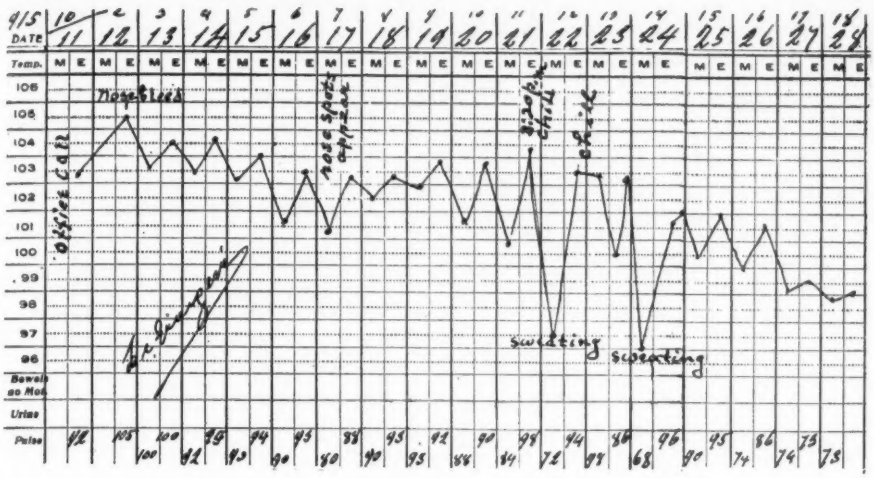
[We are thankful to Doctor McCoy for giving us this record of experience. We could not hope that emetine would prove a true "specific" for typhoid fever—and we have so stated repeatedly. However, the reports that have come to us, regarding the benefit following its use in cases of this kind have been and continue to be most encouraging. It may be that if Doctor McCoy could have given the emetine earlier he would now have a different story to tell. We should like to know what Doctor Frazier thinks about this point. Our memory is that in his paper in *The Medical Record* he dwelt with considerable emphasis upon the importance of early treatment. Furthermore, we must not overlook the fact that Doctor McCoy secured good results from the emetine treatment in several other cases. Let us have both sides, and get the real truth as to the field and limitations of this remarkable alkaloid. We want to know, all of us, just when to use it, and how.—ED.]

EMETINE AND THE SULPHOCARBOLATES IN TYPHOID FEVER

I am sending you the temperature-chart from one of my recent cases of typhoid fever. I ask the readers of CLINICAL MEDICINE to study it and then draw their own conclusions as to whether the emetine was responsible for the good result obtained, or the intestinal antiseptics and echinacea, which this patient received at the same time.

The patient, a driver, is 26 years of age, is well built, well nourished, weighs 190 pounds, and never has been sick. At my first visit, I found that he had a pale tongue, bad-smelling breath, a temperature of 102.8° F., and a pulse of 92, with respiration rate of 32. He had no pain or tenderness in the abdomen; spleen and liver were normal.

In examining this chart, I ask that you take special notice that the patient received his first injection of emetine in the evening of October 12, after having the bowels thoroughly cleaned out and with the sulphocarbolates-treatment instituted. From that time on, the patient received two injections of emetine a day (1-2 grain each time), until the 19th of October; from which time on he received them once a day, until the 21st.



Temperature chart of the first case of typhoid fever reported by Doctor Giorgessi

Then he had his first chill, apparently without any cause. Thereupon I omitted the injections for two days, but resumed them, at the rate of once a day, until the 24th. I gave a total of 18 injections, of 1-2 grain each dose. I used the dosimetric trinity at the time this patient was taken with the chill, repeating every half hour, for only four times. In my opinion, this case is interesting, in view of the use of the emetine, the appearance of the chill, and the subsequent defervescence.

The diet throughout was milk, given in association with galactenzyme. Panopeptone was also used throughout the course of the disease.

JOSEPH GIORGESSI.

Brownsville, Pa.

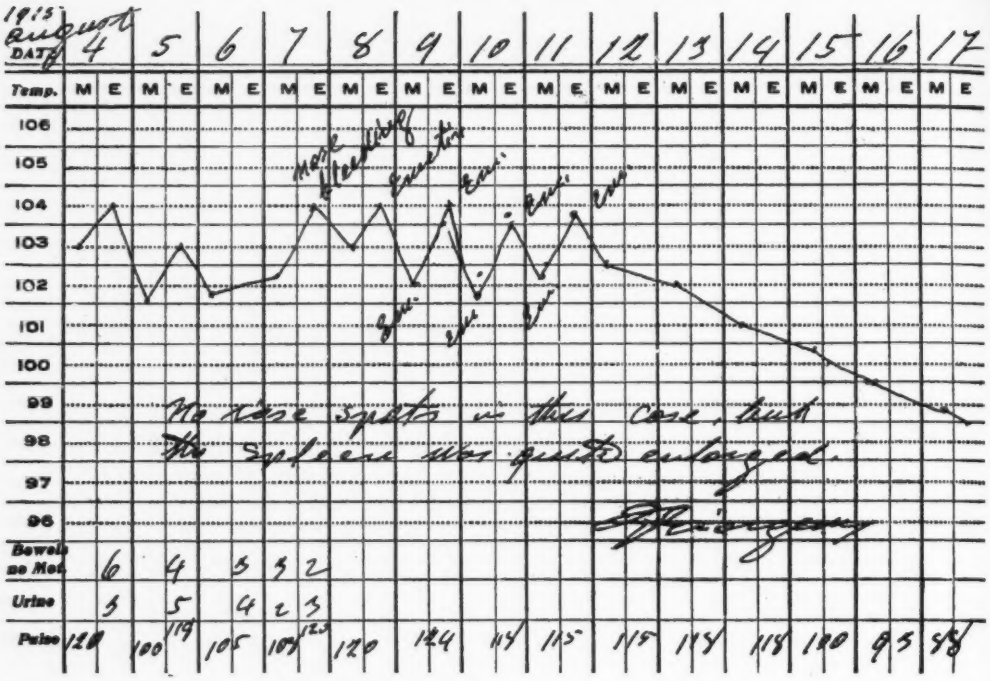
[Read the other articles upon the use of emetine in typhoid fever which accompany this.

LATER.—Since the preceding was written and in type, we have heard again from Doctor Giorgessi, who desires to report another case and present another temperature chart. He says: "The enclosed card will give you an idea of another case in which emetine was used, occurring in a boy of 10 years. He had been feeling ill and feverish for three days before I was called, complaining of pain in the stomach and no appetite. Tongue was badly coated; stomach and abdomen very tender, the latter markedly tympanitic; rapid pulse, and fever as shown by the chart. At first I thought the case one of acute gastroenteritis, and treated accordingly, cleaning the bowels with small doses of calome followed by a laxative saline, then giving bismuth. However, on the fourth day the little patient began to bleed profusely from the nose, and temperature mounted to 104° F. This led me to suspect typhoid fever, so, without losing time, I went ahead with the emetine injections, also giving the sulphocarbolates and copper arsenite internally. The chart shows the result. The patient's surroundings were most unsatisfactory—and my fee is still a long way off. However, I am content."

It is to be regretted that we have no report of Widal reaction in this and the accompanying cases; but they are very interesting, nevertheless.—ED.]

MORE EXPERIENCE WITH EMETINE IN TYPHOID FEVER

Since the publication of my recent letter in the October number (p. 956), I have had occasion to employ emetine in a few more cases of typhoid fever, about which I want to tell. One typical case was that of a boy of 14 years. Among the prodromal symptoms of the disease present, were tympany, nosebleed, and gradual rise of fever, and quinine had given no relief. I then put him on the intestinal antiseptic (sulphocarbolates), and gave emetine hydrochloride hypodermically, 1-2 grain night and morning; and in forty-eight hours his temperature was normal. He was convalescing nicely, but two weeks



Temperature chart of the second case of typhoid fever reported by Doctor Giorgessi. (See preceding page)

later, after an indiscretion in diet, he experienced a typical relapse; however, hypodermic injections of emetine brought the temperature to normal again in three days. Ten days later, a second relapse occurred, but emetine shortened the attack, and he was out in two days.

Next, I was called to a boy 9 years of age, after another physician had been treating him for a week for typhoid fever. There was marked tympanites; his nose was bleeding freely and he also was vomiting blood; the temperature was 104.5 degrees. Under the emetine-course, his temperature returned to normal in thirty-six hours, after which he went on steadily to recovery.

My third patient was a man who had been sick a week when I was called, and he had been given large doses of quinine. He had a temperature of 104.5° F.; pulse of 120; marked tympanites. I gave him 2 grains of calomel; also, one intestinal-antiseptic tablet every four hours. Emetine, 1-2 grain, was administered hypodermically. I left him some ipecac tablets, one to be taken every four hours. When I saw him again two days later, his temperature was normal.

Patient No. 4 was a young man, who had been feeling "draggy" for the last ten days. There was present pronounced tympanites and bleeding from the nose; the bowels were rather loose. The temperature stood at 104 degrees, the pulse ran 115. I gave him a dose of 2 grains of calomel and ordered one intestinal antiseptic tablet to be taken every four hours. A dose of emetine was administered hypodermically, and I left for him ipecac tablets, one to be taken every four hours. When I saw him the next day at the same hour, his temperature registered 102 degrees. I administered another hypodermic dose of emetine, directing the other treatment to be continued. The following day—that is, forty-eight hours from the beginning of treatment—the temperature was normal. Convalescence was rapid.

The fifth case was that of a 16-year-old boy, to whom I was called one Thursday evening. He had been feeling badly for about three weeks, but for the last eight or ten days he had been "up and down." Bowels were loose. Quinine had been taken. His nose was bleeding freely when I arrived, and he also was vomiting blood. Temperature,

104.5° F.; pulse, 125; decided tympanites; headache; besides other symptoms. I immediately gave him 1-2 grain of emetine hypodermically, and this soon stopped the nosebleed. I prescribed calomel, intestinal antiseptic, and ipecac, all in the same dosage as in the other cases cited. I saw him again at 11.00 o'clock that same night, also the next morning, when there was noticeable but very little change in his condition. The previous treatment was continued. On Saturday, at about 5 in the morning, a profuse sweat broke out, after which the temperature rapidly fell to normal. Up to the time of this writing (the Sunday after the Thursday eve), the patient has had no more fever.

I consider that, in all these cases of typhoid fever, their quick control has been brought about by proper elimination—cleaning of the bowels—aided by the emetine and ipecac.

Be my diagnosis right or wrong, I know of nothing that would have acted as promptly as the measures adopted. But even, if only for the sake of argument, we agree that if all these patients had malaria, it then would have to be admitted that in emetine we possess some potent remedy for the latter protozoic disease. But all of these cases were of the type in which, through thirty years of practice, I have been taught to look for a three-weeks' siege of continued fever; although, it is true, with merely the intestinal antiseptic tablet, in conjunction with calomel, as indicated, I have witnessed a good many of them aborted in from eight days to two weeks.

A professional friend of mine received a telegram, to come for consultation to a town in western Oklahoma where a young man was about to die of typhoid fever. As he was passing my office on his way to the train, he told me about it. I gave him one of my tubes of emetine and Doctor Burdick's letter to me, and suggested that he show it to the attending physician and to insist upon the use of the emetine. The physician at first refused to give the emetine, but finally, on being urged by the patient's father, gave consent. The patient was bleeding so freely from the nose that they were about to plug it, so as to prevent his bleeding to death. The injection of the emetine stopped the hemorrhage promptly and in three days the young man was convalescing. This physician immediately telegraphed for a supply of emetine, to be used in some of his other typhoid-patients, although in the first case he had used it only under protest.

Chelsea, Okla J. S. CARRIGER.

[I hope that every member of the family will read this letter in connection with those that accompany it—and then draw his own conclusions! Unfortunately, the laboratory diagnostic tests were not made in any of these cases (at least, we presume they were not), so we are not in a position to state positively just what the trouble was in each instance. It may be that Doctor Carriger, like Doctor Frazier—an Idaho physician, who first reported on the use of emetine in typhoid fever—has been dealing with a different type of disease from some of the others who have reported. At any rate, Doctor Carriger's results are definite enough to warrant considerable optimism. Anent his remarks about malaria—why doesn't someone try emetine in that disease?—ED.]

ANOTHER MAN SUCCESSFUL WITH EMETINE IN TYPHOID FEVER

I desire to report four cases of typhoid fever treated with emetine hydrochloride. This was given in 1-2-grain doses, hypodermically, night and morning. The results obtained were startling. Two cases were jugulated during the first few days of the attack and the other two began to clear up from the first day of treatment. I may add that, although adopting this course, I did not learn of Doctor Carriger's successes until both of these patients had become very ill—one having been in bed about ten or twelve days and the other one eighteen or twenty.

Doctor Carriger sent me one tube of ten tablets of emetine hydrochloride, and I firmly believe that this saved a young father's life. This man was very delirious and tympanitic. He suffered from profuse epistaxis, and he also had a serious mitral lesion. Both my consultant and I myself had given a very unfavorable prognosis. We gave him an injection of emetine and the epistaxis ceased after the first dose. In four or five days after beginning this treatment, the temperature fell, from 104° F., and over, to normal and even below. This patient, a barber, was in bed only eighteen days and is now back at work and gaining rapidly.

My brother physicians are borrowing emetine from me now, and, while it may seem rash and premature, yet, I do not hesitate to speak boldly and say that I believe intensely in the great value of this alkaloid in the treatment of typhoid fever. For an example: In a neighboring town, there have been some eight or ten deaths from typhoid fever, while

we have lost not one patient here. Results talk.

I do not desire to flatter you, but I do want to express my genuine appreciation of the splendid work you are doing through THE AMERICAN JOURNAL OF CLINICAL MEDICINE. I receive many medical journals, but my CLINIC is the most helpful of all coming to my desk. R. B. HAYES.

Guymon, Okla.

HOMEOPATHY: A COUNTERCRITICISM

For the erudition of your editorial scavenger, who picks up things here and there and in your August issue queries, "Rather late, isn't it, to define Homeopathy?" I would venture to suggest that the homeopathicity of present-day medicine makes such definition particularly timely.

That Myer Solis-Cohen administers tuberculin by mouth and cures through one dose weekly of the 12th *x* (*N. Y. Med. Jour.*, Aug. 9, 1913); that anemonin is indicated in anemic young women of tearful yielding natures, worse at night and by warmth, and better by cold and open air (Redfield, AMER. JOUR. CLIN. MED., July, 1915); that the alkaloidal practice and your valuable and intensely practical journal are largely built on a foundation of the homeopathic indications of bryonia, rhus tox., gelsemium, pulsatilla, aconite, cuprum, and other drugs that you know about; all this does not embounden you to define forever homeopathy and to rant of the century of therapeutic babel out of which has come the present-day trend of medicine.

However, it is thrown upon someone to keep alive the principle and precept of the truth, and *The North American Journal of Homeopathy* may be forgiven for an occational twenty pages devoted to something THE AMERICAM JOURNAL OF CLINICAL MEDICINE may overlook. I am not as well acquainted with the former journal as I am with CLINICAL MEDICINE, not being a subscriber for the same; still, it is fair to assume that the first-mentioned periodical does not devote a score of its leaves in every issue to Homeopathic definition.

The sarcasm of your editorial stumppicker is lost if he stops to make a comparison with the valuable front-page CLINICAL MEDICINE space wasted (?) monthly by repetition of your table of contents and your admonishment to those who already are paying for the very privilege, to "read it."

Portland, Ore. JOHN BESSON.

[We greatly regret that this letter, which was mailed to us some time in August, somehow was lost in transit [this is the author's duplicate] so that it has remained unpublished until now. It should have appeared in our September issue, of course. Certainly, we are glad to give Doctor Besson an opportunity to reply to the little item printed in our August issue. Our regret is that the reply was belated in its appearance. As to his sarcasm—it "never touched us."—ED.]

TWO MORE SMALL BABIES

I have read with considerable interest the various recent reports in CLINICAL MEDICINE regarding small babies; and this leads me to mention that during the last two years I myself have seen two of these very diminutive infants.

The first of these midgets weighed only 1 1-2 pounds when fully dressed. This infant lived to be more than a year old, the cause of its death being pneumonia. This baby was born (in the summer), at full term, after a normal labor.

The second one of these small infants weighed 1 3-4 pounds, nude. It was born after seven and one-half months' gestation. The labor was very easy. This baby is now a little over a month old, but is rather emaciated. It is doubtful whether it can be kept alive, the mother being ignorant and of the type of women who give very little care to their children.

J. M. WHITE.

Barnesville, Md.

STILL ANOTHER VERY SMALL BABY

During the last few months I have seen in CLINICAL MEDICINE several reports about very small babies; but South Dakota lays claim to the record for the smallest baby up to this date.

This baby was born three years ago, weighing, at birth, a scant 1 1-2 pounds, and it was nothing but skin and bones—and certainly not much of these. The child was blue, and it required considerable attention to get it to start to breathe. For a diaper, we used a woman's handkerchief, and a man's finger ring could be slipped over its hand up to the elbow.

The mother secreted no milk; but, even if she had, the child could not have sucked, it was so feeble; and at first, it would take but half a teaspoonful of the milk-mixture at a feeding. The mother, at the time, weighed

212 pounds, and the father is a 6-footer. For the first four or five months, we had a desperate time in keeping this little girl baby alive, but after that she began to pick up, and since then she has always been fairly healthy. Today, this child is as lively as any 3-year-old, although slightly smaller than most children of that age. The accompanying photograph was taken when the baby was five weeks old and weighed 2 pounds and 3 ounces.

The small baby reported by Dr. E. R. Buck.

E. R. Buck.

Sioux Falls, S. D.

RECURRENT ECLAMPSIA

In 1893, I was called to attend a woman in her first childbirth, this being my first visit to that family. She had been taken by eclamptic convulsions, the seizures lasting about fifteen minutes, with conscious intervals, and recurring almost exactly once every hour. With the assistance of a friendly doctor, the uterus was emptied. Several convulsions ensued afterward, but of a lighter type. Mother and child both survived.

In 1895, I was again called to attend this woman, in her second confinement. With her previous experience before me, I attempted to minimize the danger of eclampsia by means of proper diet and treatment. This time, only one light convulsion, lasting but a minute or two, occurred. The child survived. In 1896, the third confinement took place, with but a slight tremor occurring twice during the day. The baby had uncontrollable icterus neonatorum and lived only a few days.

In 1899, I attended her in her fourth confinement, this time there being no indication of eclampsia. The child, though, was emaciated and died, in two weeks, of bronchopneumonia.

The fifth pregnancy occurred in 1901. Upon being told of her condition, she refused to allow any treatment for her albuminuria, saying that she was tired of the whole business and did not care to survive. No persuasion on the part of myself, friends, and relatives availed, and she went to term without any preparation. Labor was initiated with a violent convulsion, from which she never recovered consciousness. With the assistance of a consultant, the cervix was dilated and birth hastened; this proving a twin pregnancy—boys, both of whom were delivered alive. In a few minutes after their birth each of the twins exhibited typical eclamptic convulsions, in which they died. The mother lived for four hours after parturition, dying in a state of coma.

J. A. Settle.

Reading, Kan.

THE CONQUEST OF SMALLPOX BY CALCIUM SULPHIDE IN MEXICO

The grandest and most meritorious work of my life has been performed within the past four months, namely: I succeeded in arresting the most deadly epidemic of smallpox I have ever known, and that without performing a single vaccination; and the death rate was 93 percent before I intervened, which practically was by force, without my having been called by the victims or the rattled official. And I must confess that I embarked on a very unpromising venture. I read up the history of smallpox and about what is known of its ineffective medication. I had in stock a meagre 1000 calcium sulphide granules of 1-2 grain each, and no chance to get more in reasonable time. This was not a drop in the bucket in this urgent need; and I had to employ them so that the value of not one solitary pill would be wasted.

Having used sulphur internally against the oldtime "seven-year itch" with cheering success, it struck my stupid noggin that this chemical should exercise at least a modifying influence upon any cutaneous affliction.

However, I failed to find a word in the history of sulphur, and in that of the treatment of smallpox, that it ever had been employed in that distressing pestilence. Yet, nothing discouraged, I resolved to put my brimstone-theory to the proof.

I started out by thoroughly purging every mother's son, and the parents likewise, resident in the exposed realm. I gave the grown folks a teaspoonful of flour of sulphur every night and morning, and I anointed the bodies of the little ones. I had them repeat the sulphur dosing day after day, while giving enough of a purgative to aid the sulphur in insuring unobstructed clearing of the bowels. I could not order burning of the clothing and bedding, for lack of others to replace them; but I had them boiled. I also had boiling water liberally applied wherever there had been any infection; and everybody still liable to infection was bathed with water as hot as could be borne without causing blistering.

As a fresh case of infection appeared among those previously exposed, I gave the patient calcium sulphide, pushed to saturation and sustained, and alternated with echinacoid. In this manner, every case was effectually aborted. the patients recovering the same as those treated for the prevalent fevers; and they caused no new infections.

Thus, this smallpox epidemic of well-radicated virulence, collapsed at four populous places. At one place, 17 deaths out of fifty people had occurred, in a few days, mostly before smallpox was publicly suspected, the cases having been reported as measles. But not one person died after my calcium sulphide and sulphur and boiling water called a halt to the immolation. Before this treatment was instituted, nearly everyone attacked had died.

ROBERT GRAY.

Pichucalco, Chiapas, Mexico.

[The preceding statement is copied from a personal letter recently received from Doctor Gray. Just think of the terrific load this man is bearing. Despite his advanced years, valiant Doctor Gray is doing more for the relief of suffering, under conditions which would appal the average American physician, than any man I can think of.—ED.]

DOCTOR GRAY'S LIFE-STORY

I am following with intense interest Doctor Robert Gray's story of his adventureful life, as now running in CLINICAL MEDICINE, and I am sure that other readers feel about the same as I do. I like his life-philosophy and the many beautiful thoughts he brings us, but, when, in the November issue, just at hand, he tells us that he would like to leave this life by "forgetting to wake up some fine morning," I make free to dissent. No, sir; that isn't the way Doctor Gray should go out of this world, at all. If I were this medical hero, I should want to go to bed some night, dead-tired after a hard day's work, and wake up in the morning dead, yes, *but not tired*—and go right on to work, work, work.

That's the kind of death that would suit me. And I am very sure it would suit the good Doctor 'way down in torrid, tempestuous, fever-ridden, pitiful Mexico.

OLIVER O'BAR.

St. Louis, Mo.

ALNUOID FOR PIMPLES IN YOUNG GIRLS.—TUBERCULOUS CONDITIONS

For clearing up the pimply skin of young girls, I find nothing better than alnuoid. I have seen statements that this drug should be withheld during menstruation; however, I give it right through the period and find that, if there is any irregularity, it helps the trouble.

I am using the combination of nuclein solution, guaiacol carbonate, and calcidin in the treatment of tuberculous conditions, and it has proved a winner with me. I hope other readers of CLINICAL MEDICINE will try it and report their results.

W. F. WEIKEL.

Middletown, O.

INTESTINAL WORMS AS A FACTOR IN PELLAGRA

The following is a copy of an article that lately appeared in *The Commercial Appeal*, of Memphis, relative to pellagra provings in the state of Mississippi, which is of more than passing interest, viz.:

Eleven convicts at the Rankin (Mississippi) state prison farm—seven of them serving life sentences—today (Nov. 1) were granted full pardons by Governor Brewer as a reward for submitting to prescribed tests by United States Public Health Service authorities to determine the cause of and the cure for pellagra. A twelfth member of the prison "pellagra squad" was released a few months ago because of a physical breakdown.

The granting of freedom to the eleven prisoners followed an official announcement by the Mississippi State Board of Health that experiments conducted at the convict farm under direction of Dr. Joseph Goldberger and his assistants had dem-

Five cases of pellagra in one family. Reported by Doctor Nason.

onstrated that pellagra is produced by an unbalanced ration and that Doctor Goldberger was convinced the disease could be cured if the patients were given proper food. The results of the experiment are considered by prominent physicians in this section as of exceptional importance in the prevention and treatment of the disease, which, in recent years, it is declared, has been increasing the death rate in Mississippi and several other southern states. Physicians stated steps will be taken to introduce the diet treatment for pellagra into various sections where the disease is prevalent.

The experiment was begun February 15, 1915, with twelve prisoners, each of whom was promised a pardon if he would follow during a stated period a diet prescribed by Doctor Goldberger. The diet excluded milk, fresh lean meat, eggs, peas and beans. A diagnosis conducted today by Doctor Goldberger and four Jackson physicians showed, it was announced, that six of the prisoners in the squad have pellagra in a pronounced form and that two others show symptoms suggestive of the disease.

In issuing the pardons Governor Brewer told the prisoners they were free to leave the convict farm if they desired, but he urged them to remain several weeks and be nursed back to health. Of the eleven convicts granted their freedom, six were serving life sentences for murder, one a life sentence for criminal assault, one had ten years yet to serve for manslaughter, two about five years each for embezzlement and one about four years for bigamy.

The "pellagra squad" was under the personal supervision of Dr. G. A. Wheeler, assistant surgeon of the United States public health service, who remained on duty constantly from the beginning of the test. The prisoners were given the usual prison fare from February until April 23, after which time they were placed upon the diet prescribed by Doctor Goldberger. Up to April 23 none had shown symptoms of pellagra. Throughout the period the state authorities maintained secrecy regarding the experiment because of the fear that relatives of the prisoners under observation might institute habeas corpus proceedings or take other legal steps to have them released from the "pellagra squad."

Those submitting to the test and receiving pardons were: Ernest Atkinson and Woodson Atkinson, from Lincoln County; Ira D. Wray, from Sunflower County; John Brock, from Lamar County; D. W. Pitts, from Tallahatchie County; C. Edward Pickering, from Copiah County; W. M. English, from Bolivar County; John Shows, from Simpson County; Alex Gamble, from Webster County, and Guy James, from Leflore County.

You will remember how last year the same result was obtained in about 50 cases of pellagra at our orphanages in Jackson: the diet was corrected and the pellagra disappeared; thus showing starvation, to have been preeminently the cause. But suppose the alimentary tract infested with living micro- and macroorganisms and these preying upon the individual's mucosa as well as upon his food. What would be the consequence? The same and a worse con-

dition to be amended. Hence, Abbott's slogan and mine: "Clean out, clean up, keep clean, and feed the pauper."

When we clean the alimentary tract thoroughly, then feeding does the work; but without it, it does not. Why? The answer is evident.

Have I tried to cure my pellagra-patients by feeding? Yes! Why did they break down again? This result was not due to the diet, but to a worm-infested alimentary tract; when this was cleared and kept clean and the patient fed on the same diet as before he got well, and has remained well since, although he has had the same diet as before.

I am sending you a photograph of four of a family of seven, five of whom are well: two of the family died. At the time the photograph was taken, in 1911, the male weighed only 86 pounds, while now (Nov. 3, 1915), he weighs 220 pounds. Diet never would have cured him or his family, for they were so heavily infested with ascares lumbricoides that dietetic treatment could be of no avail. The old man, to whom I gave 7 grains of santonin, said this brought a gallon of worms; in fact, he says he will never tell how bad it was. He pulled fifteen worms from his nose and mouth during the summer of 1911, and I was two and one-half or three months getting his alimentary canal free. I began treatment with 2 grains of santonin and increased this cautiously to 7 grains before any visible results were produced. The next day after the large quantity of worms passed, he was like a bird let out of a cage. He took only tonics for most of the remainder of that year (1911) and has taken nothing since (and paid me but little, since he is of the pauper class), thus helping to prove Doctor Goldberger's theory. Yet, we did not have Doctor Goldberger's dietary list until 1914.

Now, will worms take enough food in any form and from any source to starve the individual? Yes; everybody will say. Then I say so, too. But a family dietary is not the only cause of starvation. Look at the lousy calf, wormy hog or colt or horse—or child, if you please. Do they not look starved and yet eat ravenously? Clear them of the worms, then what happens? Do not all alimentary troubles give a skin manifestation, and are we not taught, in treating skin troubles, to look well to the well to the wellbeing of the alimentary tract?

Yes, starvation is the cause of pellagra, no matter what the cause of the starvation. But, dietary errors are not the only causes of starvation, or my horse would get fat and my lousy pig would look better. I do not mean these animals have pellagra, but I mean they look starved, like the man in the photograph, and he was wormy; but, when the parasites were removed he got fat, just as do the animals when they are "cleaned up."

This is just one illustration of many causes of pellagra. Suppose your patient has hookworm-disease or amebiasis of whatever variety. All insane persons in the asylums who have pyorrhea, when treated with emetine, readily improve mentally. Then, is not insanity (melancholia) one symptom of pellagra? Yes, and the worst symptom we have to deal with. Emetine has always improved the mental condition in pellagra; so, also, has Dover's powder, our ideal hypnotic. And, why? Because in these cases the ipecac is synergistic to the opium.

Now, a 16-month's-old child was brought me in July, 1915, displaying all the typical symptoms. I gave santonin, which caused expulsion of one roundworm in two weeks. There was no sign of pellagra. Today the child seems perfectly well. I gave it an iron tonic and fed it.

"Clean out, clean up, keep clean, and feed the pauper."

A. L. NASON.

Maben, Miss.

SALICYLIC ACID AND GUAIACOL INJECTION

Anent the article by Nielsen, in your August issue, page 720, on intravenous injections of salicylic acid and guaiacol, I wish to state that I have investigated this method both by observation, as it is used in a sanitarium, and by some practical experience, and, as a result, I consider these massive doses dangerous in tuberculous cases. In the majority of cases, the reaction is severe and distressing, and the results are wholly bad.

J. A. HIRSCH.

Edwardsville, Ill.

ARGYROL USED TO DETERMINE PERMEABILITY OF TEAR-DUCT

In the section of "What Others Are Doing," in the November issue of CLINICAL MEDICINE, page 1045, I was interested in a short article in which fluorescein was recommended for testing the permeability of the tear-duct.

May I suggest that argyrol may also serve for the same purpose. Some time ago, I had

occasion to instil the solution into the eyes of several of my patients, when I discovered that, when they blew the noses, they (most of them) had their handkerchiefs stained with brown silver-salt. In others, the expectorated sputum was colored by the drug.

I. A. FINKELSTEIN.

Boston Consumptive Hospital,
Mattapan, Mass.

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[This is an interesting suggestion—peculiarly so, because Doctor Finkelstein has such an abundance of material upon which to work. I hope that other readers of CLINICAL MEDICINE will give this method of diagnosis a trial.—ED.]

METASTATIC ORCHITIS

Patient, male, age 64, very obese; severe case of mumps, resulting in orchitis. Received his usual treatment including ichthyol and other topical applications with no apparent benefit. Temperature ran to 103.5° F. I then sent him pilocarpine nitrate, gr. 1-64, and the defervescent granules (No. 1), about ten of each, with instructions to take one of each every hour till fever declined. I also provided granules of calcium sulphide, gr. 1, and strychnine arsenate, gr. 1-50, one of each to be given every four hours.

The results following this medication were magical, and morning found the old gentleman free from fever and quite comfortable. Diaphoresis followed the third dose in this case.

Let anyone who thinks the alkaloids inert just try 'em awhile.

J. J. CHAPMAN.

Nellie, Okla.

HERE IS AN IDEA!

Wouldn't it be nice to remember with an appropriate gift this Christmas the good nurse who has helped you out in some of your difficult cases? It need not be an expensive present, though it should be one which will be preserved and treasured.

Here is just the thing: a gift-book edition of "Ol' Doc Lent, and Other Poems," by Dr. Frank L. Rose.

Doctor Rose is the James Whitcomb Riley of the medical profession. His verses are calculated to drive away dull care and bring one back to the sunny side of things. You really ought to have one of these books in your own library, too, Doctor. It's just the thing for your reception-room table. We have a few choice copies bound in limp leather—the Roycroft deluxe binding—which is always a source of joy and satisfaction.

The regular price of this fine book is two dollars "per"; but because you're a reader of CLINICAL MEDICINE and therefore a "good fellow" we will chop the price right in two and deliver these beautiful books, as long as they last, for one dollar each. It can't be beat.

Of course, we have the art-board bindings, which we are handing out at fifty cents each until after the holidays. The price will then be one dollar. Come to think of it, why wouldn't some of your patients enjoy reading "Ol' Doc Lent"? Why not get it for them? Better get busy now.

We presume that you have heard of that famous little booklet, "Backbone." This is without doubt the choicest arrangement of inspirational material that has ever been gathered together between two covers. As Doctor Abbott says, "It contains Hints for the Prevention of Jelly-Spine Curvature and Mental Squint, a Straight-Up-Antidote for the Blues and a Straight-Ahead Sure Cure for Grouch."

This book is the biggest "little" holiday gift that you could possibly give to anyone. The price is only 50 cents a copy or four dollars a dozen.

WHY NOT THE SYRINGE? A COMMENT

In an editorial titled as above and printed in the November number of CLINICAL MEDICINE, you raise some interesting questions. To some of these I venture to offer an answer.

In my opinion, the principal objection to the more general use of the hypodermic syringe will be found in the fact that very little medicine is administered by the physician in person. Doctors, especially in the country, hesitate to entrust the use of the hypodermic syringe to unskilled nurses; and this mainly because of the fear of infection.

Also to boil a syringe every fifteen minutes (under that form of dosage) would, indeed, require "some cooking," not to mention the fact that very often no fire is available. Furthermore, every family in which a patient was treated in this manner would have to have a syringe of its own; and you certainly could not depend upon its being kept in working order.

However, like yourself, I believe that the subdermal is many, many times the best method for introducing remedies into the circulation. I wish someone would tell me

how this method of medication can be made readily and more safely available in ordinary routine medication.

J. M. W. CANNON.

Kidder, Mo.

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[Doctor Cannon certainly gets a wrong impression as to our intent in advising the use of the hypodermic syringe. We agree with him, as will every reader of this journal, that it is out of the question to resort to the syringe in all manner of cases, acute as well as chronic. Its applicability is a limited one, and this is particularly true as regards the treatment of the acute diseases in which it is necessary to repeat doses at short intervals. It certainly would be most unfortunate if any doctor should aim to depend upon hypodermic medication in conditions of this character. Where the small-dose-frequently-repeated idea applies, the only way to give drugs, as a rule, is by mouth; and for this the granule or tablet form is the one preferably to be resorted to.

Of course, there are some acute diseases in which hypodermic medication is desirable, occasionally even imperative, as, for instance, in amebic dysentery, where emetine is a specific; or in pneumonia, with strychnine or camphor in oil to aid the failing heart; or in urinary suppression, when caffeine and sodium benzoate may give relief. Quinine injections also are highly recommended for the treatment of malaria, while a great variety of acute diseases are treated by the subcutaneous administration of bacterins and serums. These latter remedies, however, are administered in relatively large doses at longer intervals—never "every fifteen minutes." Also, they are always—or, at least, should be—given by the physician himself, or else by some thoroughly trained and competent nurse acting under his directions.

The main field for hypodermic medication, however, is in the treatment of chronic diseases—and their name is legion. Think of what may be accomplished by an injection of salvarsan or mercury salicylate in syphilis; by iron citrate, subcutaneously, in severe anemia; or by sodium cacodylate in pellagra. So much depends upon the care with which the physician watches the progress of diseases of this nature that it would be most desirable if all would have recourse to this method more frequently, for it enables them to keep these patients under close observation. The man who resorts to the syringe in chronic diseases can have, or he should have, a perfect stream of patients coming constantly to his office. When this happens, he can assure his clients the maximum of benefit; and that benefit must accrue to his own financial profit. The doctor's welfare is wrapped up with the welfare of his patients.—ED.]

SUCCESS IN A CASE OF EPILEPSY

Not long ago, a negro, 19 years old, came to me and said that for a year he had been suffering from daily attacks of convulsions. I put him on the bromides, given in small doses thrice daily, after meals. I also prescribed chloretone in petroleum emulsion, 5 grains per dose, to be taken at noon and at 10 at night. From September 22 to October 24, 1915, this man has been perfectly free from the paroxysms. Yesterday I cut down the amount of the bromides, continuing the other treatment. At present, the patient is markedly improved in health.

I hope this report may prove of value to other sufferers, and I hope that other physicians will give the method of treatment a trial.

E. H. SHOLL.

Birmingham, Ala.

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[Of course, the period of freedom from the epileptic attacks in this case is too short to warrant the hope that Doctor Sholl's patient has been completely cured. Probably there will be a recurrence of the paroxysms later. However, the experience is an interesting one, and we hope that other physicians may benefit by it.

Personally, this writer feels that alimentary toxemia has much to do with the etiology of epilepsy. Dr. C. A. L. Reed, of Cincinnati, has recently advanced the theory that some specific intestinal organism is responsible for this disease, which he has been able to relieve and even cure in a number of instances by means of surgical intervention, along the lines suggested by Lane for the relief of intestinal stasis.

If intestinal stasis is really a factor in the causation of epilepsy—and we believe it is—then the mineral-oil emulsion used by Doctor Sholl ought to prove of very decided value. Not only does this oil facilitate complete emptying of the bowel, but, according to J. H. Kellogg (see his book on "Colon Hygiene," recently published), it is a highly active solvent and readily takes up the intestinal toxins formed in the bowel; these being far more soluble in mineral oil than

they are in water. In this way, the oil treatment prevents toxic absorption.

We hope that this line of treatment may be followed by others and reported upon more at length by our readers.—ED.]

SNUFFING MORPHINE VS. INJECTING IT. OLD-TIME GALENICS

In perusing the many good things in the October CLINIC, I observe what Dr. Beverley Robinson has to say about sick-headaches. In my earlier years, especially during my childhood, I frequently suffered severely from attacks of migraine, these beginning with the rising of the sun and then continuing throughout the day until sundown, and they were called "sun-headaches." I would have to retire to a darkened room and sleep it off (if I could). These attacks continued to plague me up to and for several years after my arrival at manhood's estate.

After I began the practice of medicine, I found relief by dissolving in a teaspoon 1-8 or 1-6 grain of morphine in 5 or 6 drops of warm water and snuffing the solution up my nose—this, in place of using the hypodermic syringe. And, by the way, I have many times resorted to this method of relieving patients from the toothache, neuralgia, colic, and such when I did not have my hypodermic syringe at hand; the anodyne effect being as speedy and equally as effective as if given hypodermically.

I also read with interest what Doctor Young has to say about "The Medicine of Tomorrow." And right here I rise to remark that, notwithstanding I have fallen into the line with the procession of practicians in general, in the use of the active principles of the vegetable medicinal agents, still I look back with a lingering regard for, and a strong faith in, the efficacy of the older galenical preparations, when physicians prepared their own tinctures, syrups, elixirs, confections, cerates, powders, and pills, and dispensed their own medicines. If a physician of the old school today should send a prescription to the average drugstore for some of those oldtime, but valuable, preparations, such as Hopkins' elixir and elixir salutis, or for some of the other oldtime preparations, there would be found many druggists who could not furnish them, and there even would be some, perhaps, who had never heard of them. Still, adulteration and sophistication of drugs has become so general of late years that it undoubtedly would be difficult for the general practician to obtain reliable drugs. In those days, when a physician put up his own medicines for a patient, he didn't prescribe gratuitously for the whole neighborhood, as too often is the case when a prescription is sent to some druggists.

"OLDTIMER."

[Some time ago one of our readers gave the same suggestion, i. e., that morphine might be snuffed into the nose, when a hypodermic syringe was not handy. At that time we discouraged this plan of medication; and we must do so again. Both cocaine and heroin are being taken in this way by thousands of addicts, who find the method altogether too convenient. Let us not make it any easier for the layman to use morphine. In justice to the good brother who makes this suggestion, however, it should be explained that he advises great circumspection in the administration of morphine. In a personal letter of explanation, he states that when this snuff is provided the patient is never allowed to know the nature of the drug prescribed. Perhaps it is a good thing to remember that in default of the syringe the nasal route *may* be used.

And so "Oldtimer" sighs for the "good old days" and the "good old remedies." It was always thus. "When we were boys" the skies were always blue; the apples were bigger and redder then; and mother made the best doughnuts—far better than anyone knows how to make in these degenerate days. That is the way it looks to us—now! Same with drugs. We forget the enormous doses necessary, how vile they were to take, and how our patients damned us for the awful pukes and purges that we forced down their unwilling throats. When I think of some of the stuff I gave the babies then I wonder if they remember me still!

Contrast the accuracy, elegance, and palatability of the modern tablet or granule of an active-principle. Think of the efficiency of this form of medication, and then recall the uncertainty of the old stuff. After all, doctor, I know *you* wouldn't take the back step.—ED.]

Next Month and Next Year

WE HAVE planned for a very interesting year in 1916. Beside our regular departments, we have arranged for several new serials, two or three symposia on topics of timely interest, and some novel features that will be new to medical journalism.

The following serials will appear during the year, most of them beginning in the January issue:

The Diseases of the Prostate and Their Treatment. By Dr. W. J. Robinson.

What the General Practitioner Can Do for the Chronic Diseases. By Dr. George F. Butler.

How Surgical Emergencies Are Handled by the Great Corporations. By Dr. S. C. Beach.

Adventures of a Frontier Doctor. By Dr. Charles Stuart Moody.

Medical Gynecology for the General Man. By Dr. George H. Candler.

Biologics, and How to Use Them Successfully. By Dr. W. C. Wolverton.

We shall also continue the two splendid serial articles now running in CLINICAL MEDICINE:

An Old Doctor's Life Story. By Dr. Robert Gray.

The Letters of Doctor Leonidas Playfair. By Dr. A. H. P. Leuf.

We have arranged for two symposia in which every reader of CLINICAL MEDICINE is invited to participate.

Sore Throat. All kinds of sore throat will be discussed—diphtheria, in all forms; streptococcic, or septic sore throat; tonsillitis; "quinsy"; croup; tubercular laryngitis—everything of the kind interesting to the general practitioner. We shall concentrate on the practical phases of these diseases.

Biologic Therapy. This symposium will probably be printed in our March number. It will present a thorough review of the wonderful progress in this wonderful field. It is expected that many of our readers will participate in it. *You* are invited to do so.

Beginning with the January issue we shall introduce the following features:

Feuilleton. This will consist of a succession of stories, poems, anecdotes, and other matter not of strictly professional character. It will be set in small type and run in the advertising section. The first to appear will be a continued story, especially prepared for CLINICAL MEDICINE, entitled "The New Utopia." The author is Dr. Edward N. Reed.

State Board Problems. From month to month we shall print the questions proposed at the various state board examinations, with answers. We shall also present all possible information relative to new laws, reciprocity, and the like

A number of special articles are already in our hands, many others arranged for. Among the topics are the following:

The Treatment of Cystitis. By Dr. George H. Candler. This will appear in January.

Catarrhal Deafness and How to Treat It. By Dr. Burton Haseltine. Probably in January.

Hyperchlorhydria and Its Treatment. By Dr. A. L. Benedict. Probably in January.

Cosmetic Surgery. By Dr. Ralph St. J. Perry. Probably in January.

Cysts of the Tongue in Infants. By Dr. A. R. Hollender.

More About Our Vegetable Drugs. By Dr. Finley Ellingwood.

What We Can Learn from the Great War.

What Others Are Doing.—In this department we shall present everything new that is of value in practical diagnosis and treatment, gathered from the journals of the entire world. We shall tell about

Carrel and Dakin's New Antiseptic

How the Problem of Pellagra Is Being Solved

The Rockefeller Institute's Wonderful Work on Pneumonia

Rosenow's Discoveries as to the Causes of Infectious Disease

Emetine and Other Alkaloidal Wonder-Workers

Queries and Answers.—This department has always been very popular. It will be made even more so, giving opportunity for every subscriber to secure practical, personal help in all his difficulties.

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As to our regular departments, little need be said. You know what they are, and appreciate what we are trying to do for our friends in the medical profession. CLINICAL MEDICINE has always been an open forum for the expression of opinion. It invites discussion, and seeks the cooperation of all its friends. It tries to get very near to the heart of the doctor, *as a man as well as a practitioner*. "To do good is our religion."

We believe 1916 will be our biggest and best year. Won't you help us to make it so?

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

ON OCTOBER the 20th, 21st, and 22nd I attended the meeting of the Mississippi Valley Medical Association at Lexington, Kentucky, and it was one of the best meetings I have attended for some years. This meeting seemed to prove that there is a revival of interest in therapeutics, as the treatment of disease was discussed fully in nearly every instance where treatment of diseases was referred to.

Two of the most interesting features of the meeting were the address of Dr. Richard P. Strong, of Baltimore, who led the American Red Cross Sanitary Commission in the fight against typhus fever in Serbia, and the address of Dr. Hugh Cabot, president of the Association, on "Medicine, a Profession or a Trade."

Doctor Strong had been back from Europe but a week and his address was the first public address on his experience in Serbia.

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"We have heard much in this country of the subject of the preparedness in case of war," said Doctor Strong. "One important phase of this subject should be, the question of the preparedness of our physicians to deal with the problems relating to the hygiene of camps and large bodies of troops therein, and to the prevention of epidemics of infectious diseases, particularly such as typhoid fever, malaria, and other fevers among them." "Systematic sanitation" may well sum up the methods employed by Doctor Strong in his heroic fight against typhus in the war-ridden country of Europe. Typhus he denominates the severest epidemic disease the world has perhaps known in modern times; but with his assistants and collaborators he generously divided the honors and gave the credit for the accomplishment of the great work accomplished in Serbia.

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"Effective measures for combating epidemics of typhus fever primarily must be based," he said, "upon the destruction of lice and their eggs, though obviously secondary measures are necessary." The secondary measures included thorough and effective bathing of hordes of Serbian civilians and soldiers, and their segregation in disinfected wards, quarantined from a second contagion. The methods of bathing, the disinfection of clothing, and the recital of the trials of the commission aroused general interest in his paper. Permanent disinfecting-plants had been established in Serbia, said Doctor Strong, and the sanitary condition of the army and even of the people, after the practically wholesale cleanup, was excellent. There remained, however, he said, much work in Serbia to be done—where medical men are yet in great demand—to prevent a recurrence of the epidemic or of other epidemics. Only those who were sincere and strong of heart should make the sacrifice, he said, for they should be aware of the fact "that there are no comforts or luxuries in Serbia, and they must go with a missionary-spirit."

The bulk of his address was spent in narrating the interesting history of epidemics which have swept the earth. Doctor Strong had his elementary training in the Philippines against malaria, yellow and other fevers, did his first great work in Manchuria, when he eradicated a species of the bubonic plague, the pneumonic, which claimed a mortality of 100 percent among the people, and returned to America to assume the responsibilities of the commission and direct the delivery of the Serbian people abroad.

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After giving an intensely interesting history of former plagues, such as the black plague of 1348, the plague in London of the 17th century, the typhus plague of Egypt, and so on, he took up in detail the recent epidemic of typhus in Serbia, from which I quote from matter printed in *The Lexington Herald*.

"The epidemic of typhus fever which recently raged in Serbia was the most severe one which has occurred in modern times. A few cases of typhus had occurred in Serbia in October, 1914, but the disease did not make its appearance in epidemic form until Janu-

ary, 1915, and then in the northwestern part of the country among the Austrian prisoners, who were greatly crowded together and who necessarily were compelled to live under very insanitary conditions. The disease quickly spread from them to other individuals, and, as the infected patients and the districts in which they were situated were not quarantined and the Austrian prisoners and infected individuals were sent or allowed to go to various parts of the country, Serbia was soon afflicted with a terrible and widespread epidemic.

"The country, weakened by wars, was not prepared for an epidemic, and for a time one might say that the typhus raged almost at will. The majority of the small number of Serbian doctors sooner or later became afflicted with the disease. Those who remained well were occupied with treating the sick and also the wounded from the battlefields, and methods for prevention were impracticable or were not undertaken.

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"Wounded soldiers or those afflicted with minor ailments or diseases, with relapsing fever, wandered into the hospitals at will and entered the wards filled with cases of typhus, sometimes occupying the same beds, for it was not unusual for two or even three patients to be found lying in the same bed, and the available floor space was also filled with patients with no beds.

"The epidemic increased through January, rose more rapidly in February and March, and reached its height in April, when the number of cases was in the neighborhood of 9000 per day. These figures are only approximate, for when I reached Serbia in April there were no available statistics of the number of cases or deaths in the various cities, and only the approximate number of cases present in military hospitals were known.

"The American Red Cross, in addition to the hospital units it had already sent for Serbian relief work, decided to organize and send a sanitary commission for the purpose of combating the disease. The Rockefeller Foundation from the first was interested in this commission and generously supported it in conjunction with our Red Cross.

"Great Britain, France, and Russia also recognized, largely from a military standpoint, the extreme gravity of the epidemic and the frightful ravages caused by it and quickly organized, equipped, and sent expeditions for checking it.

"Owing to the ravages which the epidemic had made, almost complete demoralization had resulted in many parts of Serbia. So many efficient officials had succumbed that a number of the remaining ones had become discouraged, and at times they remained gloomily at home rather than go to their offices.

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"One of the first and most immediate problems which confronted me after my arrival in Serbia was that of central organization, with control and absolute authority in sanitary matters throughout the country. This I was able to secure through the establishment, with the consent and aid of the government, of an international sanitary commission, whose resolutions were immediately enforced through the ministers of the interior and of war.

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"The country, for sanitary purposes, was divided into fourteen districts. To seven of these, the French, British, and Russian physicians were assigned stations, and to the remaining seven the American physicians, all of whom worked under the central organization. A system for securing information regarding the occurrence of cases of typhus and other infectious diseases in each city and village throughout Serbia was established. House-to-house inspections for the finding of cases of typhus in the cities, with the removal of the patients to the hospitals and wards devoted to the care of typhus cases, disinfections of such individuals, disinfections of other inmates of such houses in which cases of typhus had been discovered as well as of their clothes, and, finally, disinfection of the houses themselves was also systematically begun. Quarantine of individuals who had been in contact with typhus cases was undertaken, after disinfection of their persons and clothing. In a number of such instances these were cared for in tents sent by our Red Cross where houses were not available as detention camps.

"In some instances the districts were so badly infected that it was necessary to evacuate them *en masse* and to destroy by partially tearing down and by fire the majority of the dwellings. Dispensaries were established in the different cities and the people were treated free of charge. These measures proved a great aid in the finding of cases of infectious diseases.

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"As typhus is conveyed from man to man commonly by the bite of the body-louse, the bathing and disinfection of their clothing in a short period of time was an important problem in combating the disease. For this

purpose, sanitary trains, consisting each of three converted railroad-cars, were fitted up. One car contained a huge boiler, which supplied the steam for disinfection of the clothing. In a second car, fifteen shower-baths were constructed. A third car was converted into a huge autoclave (disinfector), into which steam could be turned under atmospheric pressure. In this manner the vermin were immediately destroyed, and the clothes thoroughly disinfected.

"Large tents were erected beside the railroad sidings, on which the cars were placed. The people were marched by the thousands to these tents, their hair was clipped, and then a limited number undressed themselves, carried their clothes to the disinfecting car and then passed to the car containing the shower-baths. After a thorough scrubbing with soap and water they were sprayed with kerosene, as an estra precaution for destroying the vermin. They then received their meanwhile disinfected clothing. In many instances, when the clothing was very badly soiled, fresh clothing was supplied. Many of these people stated that they had not bathed for ten months or longer. Their faces, in some instances, betrayed surprise and in others fear when the water touched their bodies.

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"In the larger cities and in those situated away from the railroad, disinfecting- and bathing-plants were established or constructed, and separate hours were arranged for bathing women and men in large numbers.

"In many towns the clothes were disinfected by baking them in ovens, either constructed for this purpose or in those which had been built previously for the baking of bricks or other purposes. As all the hospitals were infected, it was necessary systematically to disinfect these and the inmates.

"The patients first were removed from a ward, which was then thoroughly disinfected. They were then given a bath, by being scrubbed with soap and water and "phanlos" oil (?). They were given clean clothing and placed in the disinfected ward. Their old clothing was usually boiled. The wards were first disinfected by means of sulphur fumigation, to kill the vermin. Beds were then removed and disinfected. Walls, ceilings, and floors were then scrubbed with a solution of bichloride of mercury or carbolic acid. In many instances the interiors of hospitals were thoroughly whitewashed.

"Through the International Sanitary Commission at Nish, the most complete and cordial cooperation was secured between the French, British, Russian, and American sanitarians working in Serbia.

"Largely through the combined efforts of all these workers and with the cooperation of the Serbian physicians and officials, the epidemic rapidly declined, and for the last three weeks before my departure from Serbia we could not find a fresh case of typhus. The sanitary condition of the army and of the people was then excellent.

"I trust that the sanitary demonstrations as to the prevention of typhus which have been given the Serbian people and the construction of the various permanent disinfecting-plants throughout the country will prevent the occurrence of another epidemic of typhus such as we have just witnessed, and which destroyed in the neighborhood of 150,000 people. All of the Serbian hospitals had been thoroughly disinfected before I left that country and are ready for the reception of the wounded.

"Serbia, however, is still in great need of medical men, and, as fighting has been resumed, she will not have a sufficient number of physicians, surgeons, and nurses alone to care properly for her wounded. As relapsing fever and typhus are epidemic in the Balkan states, the situation must be watched, and any outbreak of these diseases will require prompt and efficient measures to prevent another epidemic. Therefore, physicians will find plenty of relief work to do in Serbia this winter. Those going, however, should be aware of the fact that there are no comforts or luxuries in Serbia and should go with a missionary-spirit.

"We have heard much in this country of the subject of preparedness of our country in case of war. One important phase of this subject should be the question of preparedness of our physicians to deal with the problems relating to the hygiene of camps and large bodies of troops therein, and to the prevention of epidemics of infectious diseases, particularly such as typhoid fever, malaria, and other fevers, among them. I trust you will pardon me if I take the liberty of reminding you on this occasion that Harvard University offers, through its courses in the School for Health Officers, and particularly in those relating to preventive tropical and exotic medicine, what we believe to be an almost ideal training work of this nature. A number of the members of the American Red Cross Sanitary Commission to Serbia were efficiently trained in this school."

Among the Books

ELLINGWOOD: "MATERIA MEDICA AND THERAPEUTICS"

New American Materia Medica, Therapeutics and Pharmacognosy. By Finley Ellingwood, M. D. With a Practical Consideration of the Principles of Pharmacy and Pharmacognosy by Professor John Uri Lloyd, Ph. M., Ph. D., LL. D. Published by Ellingwood's Therapeutist, 32 North State Street, Chicago. 1915. Price $5.00.

For many years Doctor Ellingwood has been known among the profession in two conspicuous capacities—as the militant champion of positive therapeutics and as the enthusiastic advocate of the indigenous vegetable drug. He has fought therapeutic nihilism, tooth and nail, in season and out of season, in high places and low places. He has no less vigorously proclaimed the pharmacological and therapeutical virtues of the American plant.

In this book will be found the sublimation of these two passions of its author, reduced to rational, scientific system. It represents an attempt—and a very successful one—to set forth "a definite, advanced, accurate and reliable knowledge of the action of those agents which are made from the plant, in whole or in part." The reviewer would search long and far before he found a more apt or adequate characterization of the work than these words from the author's own preface. Not that the mineral drugs are omitted or even neglected. But the vegetable drugs are the *raison d'etre* of the book, and especially the indigenous plants.

Such a work is peculiarly timely. The European war has so seriously shut off the supply of foreign drugs that the attention of the American physician has been forced upon American products, and he is learning that his own country's products are, to a great extent, ample for his needs. This state of affairs calls for a book on materia medica which will furnish the profession, upon a plane commensurate with modern demands, the result of investigations, observations and experimental uses of this class of medicines. And Doctor Ellingwood has met the demand.

Every statement in the book has been carefully weighed. Every fact has been estimated fully, in order that it shall be accurate. The best-known authorities have been consulted, so that the work may at once be recognized as highly authoritative in every particular. The result is a highly practical and up-to-date textbook of materia medica and positive therapeutics which will delight the heart and contribute to the success of every practitioner who believes in his calling. The section on Pharmacy and Pharmacognosy, by Professor Lloyd, it is hardly necessary to say, adds immense value to the work.

TODD: "SURGICAL AFTER-TREATMENT"

A Practical Handbook of Surgical After-Treatment. By Alan H. Todd, B. Sc., M. S. New York: Longmans Green & Co. 1915. Price $1.25.

The author points out, in his preface, that after-treatment is much more than an incidental accompaniment of modern surgical procedures; still, it plays an important part in all of them, and in some it is the absolute determinant of success or failure, as, for example, in orthopedic surgery and in the various kinds of plastic operation, which are quite wasted unless the after-treatment is properly prescribed and carried out. The old idea, that kindness and sympathy and considerate attention to the patient constitute all the essentials of postoperative care, no longer holds water; a considerable amount of technical knowledge and skill is required as well.

Doctor Todd's book is an attempt to provide instruction of a purely practical character in this matter. It is based upon the author's own extensive experience as dresser, house-surgeon and registrar in Guy's Hospital, London. All unnecessary and superfluous matter has been omitted, besides all theoretical considerations, except where these have seemed essential to a proper understanding of the treatment, recommended. Neither have the rival merits of different methods been discussed, but those have been selected and presented which to the author seem to be most in accord with our modern

principles of physiology and have proved most successful in actual practice.

PRACTITIONER'S VISITING LIST

The Practitioner's Visiting List for 1916. Records of Practice for Thirty Patients per Week. Philadelphia and New York: Lea & Febiger. Price $1.25.

This visiting and record book has attained a national reputation. In addition to the ruled pages set apart for the patients' accounts, there are separate sections for records of obstetric cases and engagements, vaccinations, births and deaths, and a whole fund of miscellaneous reference and emergency information, including a list of poisons and their antidotes, a complete table of drug remedies and their doses, an alphabetical index of therapeutical reminders, and a description of the technique of ligating arteries. It is, therefore, much more than a mere visiting account book; it is a *vade mecum* for the busy practitioner.

The physical qualities of the book are all that could be desired. It is strongly and handsomely bound in red morocco, with a folding flap and printed on excellent paper. It holds its own with the best of this type of book, and maintains the high standard set by itself.

BAINBRIDGE: "THE CANCER PROBLEM"

The Cancer Problem. By William Seaman Bainbridge, B. Sc., M. D. New York: The Macmillan Company. 1914. Price $4.00.

The author believes that much of the mystery that surrounds the subject of cancer, much of the ignorance concerning it, both within and without the profession, is a result of the chaotic condition of the literature upon it—a belief in which the reviewer heartily concurs. As Doctor Bainbridge very pertinently says, the acquirement of dependable information concerning any phase of the question entails tedious search through many books, pamphlets, and periodicals. To give a clear, concise, comprehensive, and available résumé of the world's work with reference to cancer, its history, distribution, etiology, diagnosis, possibility of prevention, and treatment, besides the various minor matters connected with the subject, is a most difficult task; and it is to this task that Doctor Bainbridge (who is professor of surgery at the New York Policlinic Medical School and Hospital) has addressed himself in this volume.

The book is, of course, more of a treatise than a practical or clinical textbook. It states theories, emphasizes facts, reviews the work and opinions of those who are qualified to speak, and maintains, throughout, an attitude of "suspending judgment pending proof." No attempt is made to give a complete work on the treatment of malignant neoplasms; that, manifestly, is outside the scope of the book.

PHYSICIAN'S VISITING LIST

The Physician's Visiting List for 1916. Sixty-Fifth Year of Its Publication. Philadelphia: P. Blakiston's Son & Co. Price $1.25.

The publishers are justly proud of the longevity and stability of this little visiting book. During the sixty-five years of its existence it has made long journeys in the saddle-bags and buggies of country doctors and in the more modern cars of the twentieth-century practitioner. It has been at the birth and by the deathbed of rich and poor, famous and infamous. Its volumes hold the records of numberless physicians. It has gradually adapted itself to all the vicissitudes and revolutions of medical practice, and is just as adapted to the present day as it was to the conditions of half a century ago. No doubt many of our readers belong to the long chain of those who have used this excellent little record-book from year to year, and they will welcome the issuance of the 1916 edition. Many new buyers will find out its merits for the first time during the coming year.

DONCASTER: "DETERMINATION OF SEX"

The Determination of Sex. By L. Doncaster, Sc. D. Cambridge: The University Press. New York: G. P. Putnam's Sons. 1914. Price $2.00.

The study of sex has not yet reached a stage where it is possible to give any settled account of established facts or of generic inferences to be drawn from them. Everything that can be said on the subject, for the present, is of a more or less controversial nature. It has been approached from several different angles and by many lines, all of which lines may be said to converge toward each other, although they have, as yet, given no indisputable indication of a focal point. In view of this state of affairs, the author of this book has not hesitated to give his own

interpretations of the data surveyed by him and to criticize those of others; in this way presenting something more than a mere summary of the state of our knowledge to date, lending it the interest and value of a scrutiny and a discussion as to probabilities.

The treatment of sex problems is confined entirely to animals, including Man, all reference to the work done on plants being purposely omitted, because the problems raised by plants are in many respects different from those of animals. Technical nomenclature is avoided as far as possible, but of course could not be wholly side-stepped. Where it is used, the author has usually explained it before using it, and has defined most of the terms in a glossary. The aim of the book, which is well carried out, is to discuss all the more important evidence bearing on the problem of sex-determination, illustrating each line of evidence by one or more typical examples.

PARSONS: "COLOR-VISION"

An Introduction to the Study of Color-Vision. By J. Herbert Parsons, D. Sc. Cambridge: The University Press. New York: G. P. Putnam's Sons. 1915. Price $2.75.

Several years ago, Dr. George Talbot, of Newton, Massachusetts, in an able and thoughtful article, propounded the theory that it is the color-sense alone which gives distinct visual impressions, and that, consequently, the color-sense is identical with—in fact, constitutes—visual perception. His arguments, to our thinking, were sound in their premises and flawless in their logic. Visual perceptions, he pointed out, are the result of undulations of different wave-lengths producing more or less rapid oscillations of the rods and cones. From this, the conclusion is irresistible, that visual perceptions are the effects of color-waves upon the retina; which is the same as saying that color-sensation is visual perception.

We said at the time that we did not expect Doctor Talbot's views to receive very immediate adoption or even recognition, because established doctrines die hard. Unless we are greatly mistaken in our reading of Doctor Parson's present book, the identity of color-sense with visual perception is the inevitable conclusion to which it brings us. But, of course, it is more than a mere argument for a modern theory. It is, in fact, an exhaustive and masterly presentation of the entire subject of color-vision, from every standpoint. Extremely interesting is the very thorough discussion of the various theories of color-vision, with their implied theories of color-blindness. It is not a book of immediate practical value for the general practitioner, nevertheless, a large number of general practitioners will read it with profit and pleasure.

SIMON: "INFECTION AND IMMUNITY"

Infection and Immunity: A Textbook of Immunology and Serology; For Students and Practitioners. By Chas. E. Simon, B. A., M. D. Third edition, revised and enlarged. Illustrated. Philadelphia and New York: Lea & Febiger. 1915. Price $3.25.

The special features of the new edition of this standard work include a detailed consideration of the recent advances in the study of Abderhalden's protective ferments and its associated technic, a re-writing of the section on the Wassermann reaction, an account of the manner in which the danger from anaphylactic shock during serum-treatment may be reduced to a minimum, a discussion of the Schick reaction and of the possibility of influencing Hodgkin's disease by means of vaccine-treatment. In addition, a bibliography has been introduced, in which the reader who is sufficiently interested in the historical development of the subject or in the details of modern immunological research may find gathered together the more important references.

The author repeats his admonition, given in the first edition, that the book is intended merely as an introduction into this most intricate subject, to serve as a guide to further reading. He suggests that it might now serve as a basis for a course of systematic instruction in immunology in the schools of medicine, in combination with the usual course in clinical pathology in the third year, and he hopes that someone will have the courage to attempt such an innovation. We cordially echo the hope.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6028.—"Tic Douloureux." Regarding the treatment of tic douloureux, the subject of Query 6028 in the September CLINIC, the writer, for several years, has been prescribing, with very good success, for the relief of that as well as other neuralgias, the following mixture:

Ammonium chloride.....drs. 2
Tincture of aconite-root (U. S. P.)..gtt. 32
Camphorated water, enough to make.....ozs. 4

Direct the patient to take one teaspoonful every fifteen minutes until relieved, or until at most six doses have been taken.

GEO. D. STANTON.

Stonington, Conn.

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ANSWER TO QUERY 6036.—"Intercostal Neuralgia or Subluxation of Vertebra?" Relative to Query 6036, published in the October number: There is no doubt that in this patient a displaced vertebra is pressing on a nerve (intercostal), and that this produces the pain and the shingles. This patient could be cured by a very few osteopathic treatments, and perhaps by one treatment. I have had several such cases, and I know it can be done.

The vertebra nearest and closest to the painful spot in the spine is responsible for this condition. It is doubtful if a physician could give the treatment, unless he had seen treatments given. It is necessary first to select the proper vertebra. The patient should be placed across the bed. A trunk, flat top, is placed parallel with the bed and far enough away from it, so as to enable the patient to lie on the trunk (on which there is a pillow), with his head and upper portion of chest on the trunk and his hips resting on the bed. This would leave the abdomen free and the lower part of the chest free from contact. The patient is practically suspended, face down, the upper chest and head on the trunk, lower part of abdomen, hips, and legs on the bed.

One who understands could, by palpation, select the specific vertebra at once, and, by means of adjustment or reduction relieve the pressure on the nerve.

The adjustment is done by standing on the side toward which the dislocated vertebra points. The vertebra is rarely displaced as much as 1-4 inch to the right or left of the median spinal line, yet, this is sufficient to produce intercostal neuralgia. The pisiform bone—say, of the left wrist—is placed *against* the spinous process of the vertebra out of place. The right hand grasps the left wrist. In this position, a quick movement is given, with the idea of rapidly pushing the bone into place. Not much strength is needed. Quickness is the chief factor. If the proper vertebra is selected and the treatment is properly given, relief frequently follows (as personal experience has shown) at once. Sometimes it is necessary to repeat the treatment twice a day or once a day for several days.

Your comments on this case are logical and true. If the doctor (H. W. R.) can properly adjust the implicated vertebra, he will cure his patient. I am sorry that I am not near enough to offer my services.

J. M. SHALLER.

Davenport, Ia.

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ANSWER TO QUERY 6048.—In the November number of CLINICAL MEDICINE, in answer to Query 6048 I see that you say that normal saline solution is made by adding 8.5 Grams of sodium chloride to 1000 Grams of water.

I would like to raise an objection to the statement as it is printed. If you will look in Stedman's Medical Dictionary (which has, if I am not mistaken, been advertised in your journal) under the heading of solution you will find that there is a subhead as follows:

"Normal solution, one which contains in one liter sufficient of the dissolved substance to replace one Gram of hydrogen; the number of Grams per liter required to make a normal solution is that indicated by the molecular weight of the salt; a normal solution of NaCl contains therefore 58.37 Grams, or 5.837 percent, which is approximately ten times the strength of the physiological salt solution, usually called, incorrectly, a normal salt solution."

Some other texts use the words normal and physiological as if they were of identical meaning, which they are not.

While teaching a beginning class in surgery in one of the hospitals in Ann Arbor a few years ago I brought up the same question and referred it to the Department of Chemistry. None of the ones that I asked about it knew of or could find out anything about any authority to use the word "normal" where the word "physiological" belonged. It seems to me that there should be more persons aware of the real meaning of the word "normal."

I have in mind one case which I did not see but which was given me as facts by the man who married the nurse on the case. A physician, whom I knew personally, performed an operation on a woman, and after doing some kind of pelvic work closed up the abdomen with the patient bordering on shock. Among other orders that he gave the nurse was that at a certain time the patient should get a quart of "normal salt under the breast." The nurse in question did not know how to make the solution or did not have things handy, so she asked a druggist to make up a quart of "normal salt solution" for her. The druggist did so. This solution was given as directed and as a result the patient's breast was said to have sloughed off.

In my estimation it is dangerous to call the solution used as referred to in Question 6048 a "normal" one. The word should be "physiological."

F. F. FELLOWS.

McMinnville, Ore.

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[There is no chance for argument with Doctor Fellows. He is right, of course. The term "normal" was used incorrectly, in accordance with the careless custom of the times. "Physiological" is better, though not itself descriptive. "Isotonic" is still better.—ED.]

Queries

QUERY 6050.—"Dermoid Cyst of Pelvis." W. L. B., New Hampshire, asks diagnostic and therapeutic suggestions in the case of a woman of 27, with family history negative, married four years, who has always been in the best of health up to about one year ago, when she was taken ill at stool. "On that occasion, she was taken with great pelvic pain and tenderness on pressure, which gradually passed away, and for ten days her condition presented a typical typhoid course, but a Widal test was negative. Examination per vagina revealed an enlargement of the uterus posteriorly. The fever continuing, the patient was taken to the hospital. The white blood-cells were found to be abnormal. The enlargement back of the uterus was opened through the vagina, and it proved to be a dermoid cyst, which had ruptured and set up pelvic peritonitis. A few days later, the right ovary was removed, together with the cyst. There were many adhesions. In three hours, everything was cleaned out as thoroughly as possible, and recovery was so rapid that after a few weeks the patient was back to her normal weight—about 190 pounds.

"Now, for the past six months, she has felt a dull pain over the uterus and in her right side; this is present constantly, but at times it is peculiarly sharp, especially when the bowels act. Two months ago, she had fever for four days and much pain over the womb. The dull pain continues low down at present, and it is worse at stool. Its posterior part is enlarged and very tender. Coitus causes pain and increased tenderness. Cystitis, with some bloody discharge at the same time, occurs every few weeks, and urination is painful. Her urine apparently is normal; her color is good; she is not very nervous and does not worry about herself much; however, she gets exhausted and out of breath easily.

"Do you think there is danger of the contents of the old cyst causing the present irritation, and, maybe, cancer or another cyst or pelvic peritonitis? So much trouble hardly could come from adhesion alone."

As you can readily understand, doctor, it is very difficult to express an opinion in a case of this kind without one's making a thorough examination of the individual. It is a question as to whether an auxiliary cyst does exist or not. The fact that at intervals there is a bloody discharge from the bladder would lead us to the conclusion that that viscus is connected with a cyst or pocket

which periodically discharges its contents. Naturally, more or less absorption must occur, and we wonder, under the circumstances, that the woman's general health remains so good.

The rise of temperature which occurred two months ago, with pain over the uterus, is most significant. We are inclined to think that the sooner this woman submits to an operation, the better her chance of ultimate recovery; still, drainage through Douglas' cul-de-sac may suffice.

It would be well to send a specimen of blood and urine (4 ounces from the 24-hour output, stating total quantity voided) to a pathologist, for examination. In the meantime, we should be inclined to push echinacoid and calcium sulphide, in alternation with nuclein. Wash out the bowel every second day with normal salt solution at body-temperature. Also, give copious hot vaginal douches of chinosol-solution. Then pack the vagina with gauze strips, the upper 4 inches of which should be saturated with ichthyol and glycerin. A few inunctions of colloidal-silver ointment (unguentum Crédé) would, probably, prove beneficial.

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QUERY 6050.—"Action of Pineal-Gland Extract." J. W. G., Ohio, requests us to provide him with literature on the medical properties of pineal gland. He is treating a child twenty months of age, apparently near-sighted, with internal squint, and of deficient mental development. The child is well nourished and otherwise healthy, except for some weakness of the ankle-joints. The child does not sit up alone or walk unless supported by the mother.

We are unable to furnish the desired literature. Armour & Company manufacture a tablet of pineal-gland extract, also the powdered gland substance, the price of the latter being $5.00 per dram.

A summary of the anatomy and function of the gland and recent experimental work upon it will be found in Vincent's "Internal Secretion and Ductless Glands." See also Bailey and Jelliffe's monograph, which appeared in *The Archives of Internal Medicine* of 1911; and the exhaustive article by Charles Dana and William Berkeley on "The Functions of the Pineal Gland," printed in *The Medical Record* for May 10, 1914.

What we at present know of the pineal gland is derived from experiments on animals (with extracts of the gland), clinical and pathological studies, and a consideration of the embryology and phylogeny. Intravenous injections of a properly prepared extract are said to cause lowering of the blood pressure; small doses so injected having no such action, according to Cyon, but in large doses, he reports, the heart beat increased in strength and became slower.

Pineal extract causes vasodilatation in the genitalia of male cats; it also causes diuresis and increased volume of the kidney.

As you will gather, the reports as to the physiological action of extracts of this gland are somewhat contradictory. It is supposed to stimulate unstriped muscular tissue of the intestines, uterus, and pupils, and to cause vasodilatation of the genitalia and kidneys, transitory diuresis, glycosuria, and stimulation of metabolism.

It remains for physiologists and pathologists definitely to determine the function of the gland.

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QUERY 6051.—"Premature Ejaculation." C. A. L., Massachusetts, wishes to know what to prescribe for premature ejaculation.

In the first place, the cause of premature ejaculation must be ascertained in each case and treatment based upon a clear conception of basal pathology. In many cases, the instillation of nitrate of silver by means of an Ultzmann syringe, beginning with 1 grain to the ounce and increasing at subsequent treatments to 5, 10 or even 15 grains, may be tried. Such injections should be given twice or rarely three times a week. Hot rectal douches do much to improve the condition. Frequently massage of the prostate gland and seminal vesicles proves extremely beneficial.

It is unwise, however, to institute treatment, unless one is sure of vesicular and prostatic-urethral conditions. Not infrequently a small eroded area in the prostatic urethra is the cause of the trouble. Sometimes the disorder is of psychic origin or is due to debility. Such patients may receive hot and cold applications to the perineum; also cool salt enemata. Internally, small doses of hydrastoid, hamameloid, and hyoscyamine are advisable, with lecithin and nuclein as alternants. Also, frequently, a pill containing strychnine hypophosphite, gr. 1-100; phosphorus, gr. 1-200; cornuoid. gr. 1-6; cactoid, gr. 1-64; nuclein solution, m. 5; three times daily may be given with advantage. Staphisagria is another useful remedy.

Frequently, premature ejaculation proves rebellious to all treatment, and, again, as has already been pointed out, the correction of a very simple lesion causes prompt disappearance of the symptoms.

If you will make a thorough examination of the patient and report your findings, we shall be in a position to aid you more intelligently.

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QUERY 6052.—"Nervousness." J. M. I., Illinois, desires help in treating a patient, aged forty-nine, who says he is of "nervous temperament."

"His hands and feet are cold; has spots on body that feel as though they were being burned; has a feeling as though ants were crawling over his body; has headache at times, usually suboccipital, at times frontal, then may change to temporal; constant roaring in ears, this latter symptom, however, not having bothered him for a year past. The 'burning spots' will disappear for two weeks, then return on another part of the body.

"His urine has been examined 'twenty times' and found to be O. K. This man feels like doing a big day's work. He is now on a farm, but cannot keep up the pace. If he works right up to the meal hour, he cannot eat or even take a drink of water, but if allowed to sit around and read for an hour he then can eat. He was operated upon for appendicitis a little over two years ago and pus flowed from the wound for five months."

We regret to say the clinical picture is so vague that we are unable to venture a diagnosis. You state that the man's urine "has been examined twenty times and found to be O. K." We should, nevertheless, very much like to have you send a specimen (4 ounces from the 24-hour output, stating total quantity voided) to a pathologist, for examination, and at the same time give us as clear an idea of the patient's condition as can be secured from a very thorough physical examination.

The reflexes should be tested, blood pressure, pulse rate, heart sounds, and morning and evening temperature ascertained. See if you can discover splenic or hepatic engorgement. Examine the spinal region carefully for anesthetic or hyperesthetic areas. What about the patient's sexual habits and history?

Formication, as you are aware, occurs frequently in diabetes; it is an occasional premonitory symptom of apoplexy and may occur as a consequence of a tumor of the brain. It is most frequently observed in hysteria and neurasthenia; more rarely in the earlier stages of locomotor ataxia, chronic spinal meningitis, myelitis, disseminated sclerosis, hepatic congestion, socalled "gouty diathesis," and cases of granular kidney.

Tingling and burning in various parts of the body may merely evidence disordered body-chemistry and not infrequently is a premonitory symptom of herpes; is frequently observed in hysteria and neurasthenia; and sometimes is present in the early stages of myelitis, locomotor ataxia, and appendicitis (here presenting, as a rule, in the right leg). In brain tumor, the parts supplied from the seat of the lesion are affected.

Considering the age of the patient, the possibility of an oncoming sclerosis or even myelitis must be considered. On the other hand, if the patient is of a nervous temperament and passing through the critical period of man's life, it is more than likely that the whole train of symptoms, evidencing sclerosis, will disappear under thorough elimination and the administration of tonic reconstructants and positive suggestion. Ascertain condition of the prostate gland.

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QUERY 6053.—"What Was the Real Cause of Death?" W. S., Minnesota, writes: "Early in January you had examined for me a specimen of urine, to aid me in arriving at a diagnosis. This case (which has just terminated in death) has been very puzzling throughout, and perhaps a short history thereof will be of some general interest.

"The first time I was called, in July, 1914, to this patient, he was suffering from a violent attack of cholera morbus. He made a good recovery and resumed his work as scaler in logging-camps. During the next four months, he worked steadily, but had two sharp attacks of cystitis, evidently exacerbations of a chronic condition. In November, he complained of a severe pain setting in under the point of the right scapula after walking or riding any distance and which was relieved by sitting so that he could put considerable pressure on the painful part, as by leaning against a tree or building.

"At that time, I saw him once a week, then, after four weeks, as his condition was becoming worse, and the work required constant riding or walking, I advised him to give up work for a time. Thereupon I saw him more often. After many uranalyses, I found albumin in January, and it was then that I sent the specimen to you to have it tested at a reliable laboratory.

"About the middle of January, the man was somewhat improved, but I could make no satisfactory diagnosis, and, so, I advised him to consult the Mayos. He started for Rochester, but at a stopover visit some friends persuaded him to see a physician in

that city. The latter kept him under observation for ten days, using x-ray, cystoscope, uranalyses, ureteral catheterization, and so on, and finally said there was pus from the right kidney, chronic cystitis, suspected malignancy at the pylorus, and cirrhosis of the liver.

"A sample of pus was sent to the state board of health, where the bacillus coli was isolated and an autogenous vaccine made. Of this vaccine, I gave the patient ten injections, 0.2 Cc. at first, later, 0.3 Cc., and once 0.5 Cc. No reaction whatever followed these injections.

"Following the vaccine-treatment, in the absence of any definite diagnosis, I resumed my former line of treatment, prescribing according to symptoms, until April, when the patient was so much improved that he moved onto a farm, and I have not seen him since then.

"After a month, during which time he ignored my direction not to do any hard work, he was again down and under treatment of a local physician, who was directed by the outside doctor above referred to. After a short time, he returned to that doctor for further examination, and in about two weeks was sent home to die of 'cancer of the colon,' located back of the bladder. On the way home, he was taken violently ill, and was taken to a contract mine hospital at C—. Here, one of the staff physicians insisted that there was a cancer in the rectum and this had opened into the bladder. He thus accounted for the quantity of gas passed by the urethra. The other physician there was just as sure that there was no cancer, but thought the right kidney had entirely sloughed away. About a week before death, the man passed from the bowel a very hard mass (as hard as soft stone), which was assumed to be 'sloughing of cancerous material.' While at the hospital the patient gradually failed in strength, had repeated chills, little or no fever, much pain and prostration. His heart and respiration were normal and he was fully conscious until about one hour before death.

"At the postmortem examination, the liver was found in perfect condition; the kidneys were normal, except for a scar of a fully healed lesion, the nature of which could not be determined; the stomach, the gall-bladder, and intestines were normal, except that the caliber of the intestines near the pylorus was somewhat narrowed. The bladder showed a chronic cystitis and there was hardening of the walls.

" 'Septic poisoning from absorption from the bladder' was the cause of death, as given in the death-certificate."

This is a most interesting case and shows how frequently erroneous diagnoses are made. We are inclined to believe that the supposed "cancer" was really a fecal concretion or impacted enterolith. Pressure-necrosis doubtless occurred, with resultant vesical fistula. The direct cause of death was probably generalized sepsis, due to the absorption of toxic material.

Such cases are, of course, highly instructive; however, it is more than probable that, had an Abderhalden test been made some time earlier, the patient would not have been sent home "to die of cancer of the colon."

Not many years ago, this writer was called to attend a physician in the immediate neighborhood who was supposed to be dying of carcinoma of the colon. Kerosene enemata, with proper positioning, and massage brought away a fecal mass the size of and as hard as a Michigan potato, through the center of which ran a tortuous channel. Fluid feces, in small quantity, were thus alone able to pass and the patient was slowly dying from retention toxemia. As soon as the mass was removed, cachexia disappeared, and in a month the patient was able to resume practice.

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QUERY 6054.—"Dysmenorrhea." A Pennsylvania physician presents a short history of a case and asks for therapeutic suggestions. "Woman, twenty-five years old, single, began menstruating at thirteen and was normal for one year. During this year she played basket-ball quite hard and rode horseback a good deal, falling once, but (seemingly) she recovered in a short time. Shortly after the first year of menstruation, she flowed very profusely and would menstruate every two weeks or upon the least overexertion, but with little or no pain, for about six months, then slight pains began and gradually grew worse until they became labor-like. She has been under the care of twelve different doctors, but has received very little benefit. Her stomach is not able to stand very much medicine, though between the attacks she can eat and digest almost any kind of food.

"During the past eighteen months, she has been under the influence of ether over sixty times, this agent affording the only relief. I have had her under my care for the past six months, and by deep pressure low down in the abdomen I am able to inhibit the uterine plexus, and then an H-M-C No. 1 will give

relief for a few hours. Lately, however, this causes nausea and vomiting. The uterus has been dilated several times, and two months ago I dilated and inserted a drainage-tube; and, while this sets up considerable irritation, she has been better than for years. I might add that I have also used heat, vaginal douches, and depleting suppositories all the time."

As you will readily understand, it is a little difficult to prescribe intelligently for dysmenorrhea without making a careful examination of the patient or at least being thoroughly familiar with general and pelvic conditions.

We are inclined to believe, however, that you may exclude in this case malformation and undevelopment of the genital organs; and, as dilatation has been performed, it is reasonable to conclude that stenosis does not cause the pain, though, as you are aware, stenosis is characterized by expulsive and laborlike pains followed by discharge of blood in clots.

In neuralgia, pain begins before the flow and ceases with its appearance. Occasionally, however, it may continue intermittently during the entire flow. Agony in some cases is so acute that patient becomes hysterical or faints. Pain is not fixed, but shoots from the pelvis down the thighs or into the abdomen and thorax. Invariably the general health of the patient is bad.

In pelvic congestion and inflammation, pain is situated mostly in the pelvis, back, hypogastric and inguinal regions. The pain usually precedes the flow and gradually ceases after it is established. The character of the pain may be dull, heavy, bearingdown or dragging.

You do not state the character of the discharge. The general history would lead us to believe that you have to deal with endometritis. Search carefully for shreds. Here, the pain begins with menstruation and continues to grow more and more severe, becoming laborlike in character until finally the membrane is expelled. Such expulsion is usually followed for a few hours by excessive bleeding. There may be during the intermenstrual period a sanguineopurulent leucorrhea.

It is quite possible, of course, that dislocation, probably anterior, of the uterus exists, but it is unusual, under such circumstances, for the pain to be as intense as it appears to be here. It is to be borne in mind that the bend in the uterine canal forms an angle which not only obstructs the flow, but sets up a thickening of the endometrium. The congestion, incident to menstruation, causes further congestion, therefore, increases the obstruction. These cases are readily cured by the correction of the displacement and insertion of an intrauterine stem.

We suggest that a very thorough examination be made in this case. If there is the slightest suspicion of anteflexion, a stem should be inserted. Should you suspect endometritis, curette lightly and send scrapings to a reliable laboratory, for examination. We take it that the woman's bowels are kept freely open. Has the patient's urine been examined?

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QUERY 6055.—"Serum-Therapy and Iodine." C. A. T., Kentucky, asks us to explain how and where the different serums are introduced into the body. "This serum-therapy," he says, "is new to me. Why do surgeons use tincture of iodine on the field of operation. What is meant by ampule?"

It is out of the question to condense into reasonable space even the principles of serotherapy alone; hence, we must refer you to the textbooks, and one of the best works on this subject is Bosanquet and Eyre's "Serums, Vaccines, and Toxins," published by the Funk & Wagnalls Company (price $2.00).

In preparing the field of operation, surgeons use iodine, as this is now recognized as one of the best antiseptics and bactericides available. In order to secure greater penetration, it is frequently mixed with glycerin. Ichthyol, iodine, and glycerin, in proper proportions, are also used in the cavities of the body.

An ampule is a small glass container, sealed air-tight, employed by manufacturers in which to market serums and bacterins and other liquid preparations subject to deterioration or for the sake of accurate dosage.

The word ampule, as now used commercially, is the English form adapted from the French *ampoule*, this, again, being derived from the Latin *ampulla*. The term is also used in anatomy to describe any flasklike dilatation of a canal, as, for instance, the ampulla canaliculi lacrimalis, an enlarged portion of the lacrimal canal, or tear-duct; the ampulla of the fallopian tube is the external half thereof; the ampulla of the rectum is the dilated portion of the rectum near its termination. The ordinary meaning of the word ampule is really a flask-shaped glass container.

Advertisers' News Notes

No practitioner who expects to treat cases of chronic disease—and what practitioner does not?—and who hopes to treat them successfully, can afford to neglect electrotherapy. He ought to have in his office at least sufficient equipment to do diagnostic and therapeutic x-ray work and high-frequency treatment. The expense of such equipment may seem a little high, but it is only a matter of initial cost, and pays for itself over and over again in the efficiency that it bestows and the returns it brings. Above all it is important that he should have high-grade equipment. To dabble with inadequate and poor equipment is dead loss and failure. It costs less in the long run to get good stuff. The Scheidel-Western X-Ray & Coil Co., of Chicago, are offering some tempting bargains in second-hand coils right now, which you will find ever so much superior to first-hand trash. With these coils you will be able to cover all the ground you are likely to encounter in this line of work. Write to the Scheidel-Western people at once, before this opportunity passes. And be sure to state what electric current you use, so that they may advise you intelligently.

When the average layman thinks of Pluto water he thinks of it merely as an aperient; and it is to be feared that not a few medical men also have this limited idea of this famous mineral water. That is quite a mistaken view, whoever holds it. Its aperient property is, to be sure, a highly valuable one; but it is only one. Pluto water has a gently stimulant effect upon the mucosa of the entire gastrointestinal tract, from the stomach down, and its beneficial effect is therefore felt from the stomach down. It both creates an appetite and stimulates good digestion to wait on appetite. In the small and large intestines it does the same service, promoting the healthy secretions of the bowel and favoring absorption, as well as clearing it of toxins. A continued course of Pluto water, therefore, while it cleans the gastrointestinal tract, at the same time promotes nourishment and increases the weight of the patient. It is a splendid adjunct to the treatment of intestinal indigestion.

"Woe unto you, hypocrites," once said the Greatest of all Physicians. "For ye make clean the outside of the cup and of the platter, but within they are full of extortion and excess. Cleanse first that which is within the cup and platter, that the outside may be clean also." He was speaking, of course, of the moral nature; but the same lesson holds good in regard to the physical nature, and it is scientific hypocrisy to make clean the outside of the body while within it is full of putrefaction and waste. Even from the purely esthetic point of view this principle is valid. Outward cleanliness and beauty is impossible unless the internal tracts and organs are kept free from effete matter. Cleanse first that which is within, that the outside may be clean also. From the standpoint of health and efficiency it is of still greater moment. A neglected gastrointestinal tract is a menace to health and an invitation to disease. At the time of the Iroquois theatre fire in Chicago, a distinguished architect, being asked his opinion as to the best system

of emergency exits, replied, "Have no emergency exits; have plenty of exits and put them all into constant, routine use." Again the principle applies to the care of the body. Make the cleaning of the colon a daily, routine affair, so that there may be no emergencies. This can be done by the daily use of Laxa, the famous colon food, made by the Kellogg Food Company of Battle Creek. It is not a drug, but a pleasant food, which supplies both the bulk and the stimulus necessary to the maintenance of regular bowel action. It "makes clean the inside of the cup and of the platter."

"EVERS to Tinker to Chance." What baseball fan does not remember this old formula of the Chicago baseball machine, on which, in its palmy days, so many victories were won? The A. I. Root Company, of Medina, Ohio, have adopted a happy paraphrase of the formula to express the winning qualities of their Airline honey, "From flower, to bee, to you." Honey is the nectar of flowers, gathered and stored by the honey-bee. That is to say, true honey is. A honey made by feeding the bees sugar or syrup or other artificial sugar food cannot be regarded as genuine honey. That is what the Root people mean by their watchword; it is genuine honey—"from flower, to bee, to you." Honey has all the properties and food values of sugar, plus that indefinable something which makes it, indeed, a nectar to the taste. Wherever it is desired to supplement the supply of carbohydrates in the diet, honey is an efficient and delightful way of doing it. The A. I. Root Company will send you a generous sample of this delicious nectar for the asking.

IT HAS only been in the recent past that America has developed a cure which, in point of bath facilities, medical service and surroundings, could be compared favorably with the celebrated cures of Europe. There is, however, now at White Sulphur Springs, West Virginia, which is located on the main line of the Chesapeake & Ohio R. R.—over night from New York on the East, and Cincinnati on the West—a cure which has no superior in the world. All of the leading spas have been visited and their facilities for the treatment of ailments of every kind, which are usually effected by a cure, have been incorporated at this wonderful resort, located in the very heart of the most attractive Blue Ridge Mountains. In the bath establishment, which is annexed to the beautiful Greenbrier Hotel, will be found every known form of hydropathic treatment, under the control and direction of two celebrated physicians, Doctor Capito and Doctor Kniffler, formerly of Wiesbaden, Germany. Full information may be obtained by addressing them at White Sulphur Springs, West Virginia.

"AND when all things were made," said an old writer, "there was nothing made better than tobacco, to be the poor man's comfort, the lonely man's companion, the sick man's medicine, and the rich man's luxury." Most doctors smoke, and find in their cigar, at various times, all of the qualities and virtues thus enumerated, for they are, at various times, poor and lonesome and sick and (let us hope) rich. Whether or not, the doctor is a genial fellow, and likes his smoke; and, moreover, he is usually a connoisseur and knows a good cigar when he smokes it. For that reason, above all others, the doctor takes to J. R. W. Panatelas as soon as he lights one for the first time. Once lit, figuratively speaking, he never lets it go out. Literally speaking, he never allows himself to be without a supply. Incidentally, of course, he also finds

himself saving 30 percent to 50 percent of his cigar bills—which is important enough as an item, but it isn't the chief one, and would never explain the popularity of the J R. W. It's kwality kounts. If you don't know what we're talking about, write to J. Rogers Warner, Buffalo, N. Y., and get wise without further delay.

No patient who has ever had gonorrhea, and no physician who has ever treated it, needs to be told of the disagreeable annoyance which attends the ordinary mode of local toilet. You are between the devil and the deep sea. If you make a dressing which will avoid soiling the clothes you dam up the drainage and defeat your treatment; if you allow for proper drainage you keep your patient in a constant nasty mess. With what eagerness and sense of relief, therefore, will both doctor and patient welcome the D. A. B. D. Aprons, supplied by the Walter F. Ware Company, of Philadelphia, Pa., for taking care of this very feature! This excellent device protects the clothing and bedding from becoming soiled with the discharge, without interfering with drainage, and are at the same time ventilating and cool. They are furnished with a flap which can be let down for urination and application of fresh cotton. And, in combination with the apron, if you wish it, you can have a suspensory which relieves the testicular strain and thus wards off serious complications in that direction. All for the ridiculous price of 50 cents apiece, with a discount of 20 percent to physicians. Don't let your patient find it out first, doctor.

The Goodform is a garment, not a harness. We should search long and far before we could find, or devise, a better characterization of these elegant sup-

porters than is contained in this terse epigram of the manufacturers'. Yet they have all the supportive virtues, and more, of the old-fashioned strap-and-buckle arrangements. One of its best features is that there is no annoyance from rolling up from the bottom or down from the top, for the elastic part of the support is attached to a light but durable mesh so as to give the whole the form and character of a union suit, which holds itself properly in place while not interfering in the least with the elastic function of the support. It can be worn by men or women, and padded as desired. Hygiene and esthetics are both met and fulfilled, together with the special purpose for which the support is worn. Your patients will be pleased at the improvement this device makes in their figures, and you will be pleased at the effectiveness with which it does its physiological work.

"THE apparel doth oft bespeak the man." A well-made, stylish overcoat or suit not only serves to keep a man warm, but makes a good appearance, enhances his prestige, and inspires confidence. So, also, with the physician's office equipment, and furniture. Not only should he have the furnishments that he needs for the proper performance of his work, but he should "put up a good front." It is quite possible to combine the two. It is just as easy, when you are furnishing your office, to get stylish, up-to-date, handsome pieces as to get the other kind. And just as cheap. Look at the illustration in Max Wocher's advertisement in the advertising pages of this issue if you want to get an idea of an attractive office equipment. This particular picture shows the outfit of an eye, ear, nose and throat specialist; but the same firm can fit you out with whatever combination you wish, in the same attractive style and at equally attractive prices.

Don't forget that your office entourage is the outward and visible sign of your character and ability and fitness to serve your patients.

SOME years ago the Boston Hygiene Association gave out the statement that 95 percent of school children have bad teeth. Dr. Oscar Dowling, discussing this statement before the A. M. A., said, "I could not believe it, and in the first school I went to after that, I asked the privilege of making a personal inspection of the children's teeth, and out of 100 children examined that morning I failed to find one that had perfect teeth. I urged upon them the importance of using a toothbrush, endeavoring to teach them how to use it."

Which was excellent advice, as far as it went, but in the majority of cases something more is needed than the mere use of the toothbrush. An efficient antiseptic and entamebic cleanser is all-important, for most defective teeth are the seat of infection, both by germs and by amebæ. We venture to suggest an addition to Dr. Dowling's recommendation, which, of course, the doctor could not well make under the circumstances, namely, that these children all use Borothyme Tooth Paste on their toothbrushes, and that you, doctor, see that they do so, insofar as they are under your influence. And, if there are the least signs of pyorrhea, we further suggest that you treat their gums with Boremetine. Let us tell you about these preparations. Drop a line to The Abbott Laboratories, Ravenswood, Chicago.

SEVERAL months ago, it was pointed out in these pages that in their opposition to the passage of an optometry law in Illinois the doctors neglected the one argument for which the public cares a rap, namely,

a demonstration that they (the medical men) could and would do the work of refraction themselves. And, in the absence of this argument, the doctor lost the day and the optometrist won. The State took away from the medical profession the talent which it had so carefully buried in a napkin, and gave it to a body of men who undertook to make ten talents out of it. Now, more than ever, if the doctor really believes in refraction as a part of medicine, and if he really wants to keep it out of non-medical hands, he will have to get to work and practice it. And if he doesn't know how, he will have to get busy and learn. Fortunately, it is not even now too late to take the field. Even yet it is an open contest, with the advantage all on the side of the doctor. Refraction *is*, after all, peculiarly the work of the doctor, and the public knows it. Everything else being equal, people would rather have the doctor do it than anyone else. They only reluctantly go elsewhere because he turns them away. If the doctor frankly says he doesn't know how to refract, then it is an easy matter to learn. Equipment is simple and inexpensive. He does not even have to spare the time to go to a city and take a postgraduate course. Far less does he need to be a full-fledged oculist. Turn to Doctor Atkinson's announcement, on page 37 of the advertising section, or drop him a line at Room 614, Lincoln Building, Chicago, and he will tell you how the thing is done.

You wouldn't think, in these days, of lighting your office with an old coal-oil lamp; you wouldn't call your assistant by means of an old-fashioned jerk-cord bell; you wouldn't run your centrifuge with a hand-crank if you had electricity in the place. Why, then, should you use the old-time forms of sterilizer, with their

sloppiness and their slowness, when you can just as well avail yourself of the modern high-pressure "National" sterilizer, which does the trick in half the time and turns out your instruments and dressings bone dry? With other sterilizers you have to spend as much time drying the dressings as in doing the sterilizing; with the "National" they are ready for use as soon as they come out. The saving in running expense quickly pays the first cost of the apparatus, to say nothing of its convenience and efficiency. It is made by the Northwestern Steel and Iron Works, Eau Claire, Wisconsin, who will gladly send you one of a free ten-day trial, because they are sure that you will never let it go back after you have once tried it out. Fill out the coupon at the bottom of their advertisement and mail it to them at once.

A FRIEND of the writer's who had just returned from a visit to England—this was before the great war—remarked that one thing which struck him very forcibly in London, as compared with Chicago, was the fact that over the door of so many commercial and other concerns he read the legend, usually graven in stone, "Established in 1700," or some similar ancient date, whereas in Chicago almost every other place of business seemed to be decorated with a piece of canvas bearing the legend, "This place has changed hands." Even over here, however, we do appreciate the value of long establishment and stability. Fellows Syrup of Hypophosphites, for example, makes a powerful appeal to the profession on the ground of its long entrenchment in the confidence and favor of the profession—conjoined, of course, with the equally long-

continued steadiness with which the product has maintained its standard and its title to such confidence and favor. Mere age is of no particular value. But age, with sustained merit—these two factors make Fellows Syrup unassailable.

IN SPITE of the passing away of "symptomatic treatment," pain still continues to hold the stage, if not in the title role, at least in a very prominent part, in the great drama of disease; and the relief of pain still continues to be an important item in the function of the physician. By the same token, an efficient and safe analgesic still remains one of the chief desiderata in the doctor's armamentarium, especially one which will not disturb the patient's other functions or form a drug habit. Opium, for various reasons, has largely gone out of general use, and is going still further into desuetude. The logical supplanter of opium is Phenalgin, which neither disturbs digestion, suppresses the secretions, nor creates a habit, yet effectively controls pain, wherever located or however severe. In this preparation, at least, we have one dependable analgesic, upon which thousands of physicians have come to rely. If you have used it, you will understand why they rely upon it; if you have not, you have a happy experience before you.

SOME of the skeptical ones—they are becoming fewer and fewer all the time—smile when we speak of the important part played by body acidity in precipitating and prolonging disease. All right: let those laugh who win. All you have to do, if you, perchance, happen to be one of the skeptical ones, is to try it out. The next case you have of any gastrointestinal or metabolic disorder, especially of the chronic type, that doesn't seem to respond to your treatment as you

think it ought, test the urinary acidity, and if you find it high (as you probably will), give the patient heaping teaspoonful doses of Sodoxylin two or three times a day, intercurrently with your other treatment, and you will be so surprised at the result that you will forget to be skeptical any more. Perhaps you are not skeptical, but you have been neglecting this feature of treatment. If so, get back to it, doctor, and reap its advantages. Sodoxylin is not a temporary fad; it is just as efficacious now as it was when we first introduced it. It is indicated wherever there is high urinary acidity.

In displacements of abdominal viscera, operative treatment is nowadays reserved only for the very severe and obstinate cases, since it has been shown that much of the discomfort and functional compromise from which these patients suffer can be relieved by the wearing of a proper supporter. Although, unfortunately, this condition is particularly prevalent in women, displacements of the stomach, kidney, etc., are not infrequently observed in men, and these cases yield equally well to the use of a proper abdominal supporter. The Pomeroy Special Supporting Belt has been highly endorsed by many prominent members of the profession as an appliance constructed on anatomical lines, meeting all the requirements in cases of visceroptosis.

The general practitioner has more cases of spinal tuberculosis and spinal troubles due to other infections than he commonly realizes. A careful examination of the bare posterior portion of the body should be made in every case coming to the office in which any doubt of diagnosis is present. A slight jar of the spine may be the inciting cause of a spinal tuberculosis, for, as we know, the bacillus is present often in the body, and a slight traumatism may furnish the nidus for the active development of the disease. If not recognized early and treated efficiently, about 80 percent of such patients die, whereas by early diagnosis and treatment the mortality may be reduced to about 15 percent. The *sine qua non* of treatment is rest and support to the spinal column, best obtained by the application of a splint. This should be light in weight and comfortable to wear, while giving good longitudinal support to the spine—a combination of qualities well exemplified in the Sheldon Spinal Appliance, made by the Philo Burt Manufacturing Company, of Jamestown, N. Y. It is the prince of spinal appliances.

All drugs, of course, ought to be made-on-honor and dependable; but emergency drugs *must* be. In this class are heart stimulants, of which digitalis is the chief. An unreliable, or even a clumsy preparation of digitalis is worse than none at all, for it gives a false guarantee of security that is not there. Digitalis, whether it be used for immediate or for remote effect, is in its essence an emergency drug, and, like all emergency weapons, must be all sharpened and brightened and ready for use, and must not fail when it is used. There is no excuse for any physician having any other kind of a digitalis; it is to be had by the exercise of ordinary care in buying. All that you have to do is to specify Digalen (Hoffman-LaRoche) when you order. If you do that, you are guaranteed; if you don't, nobody knows what you will get. In spite of the war and the shortage of German products, the price of Digalen remains precisely the same as before the war. So there is absolutely *no* excuse for buying an inferior digitalis.

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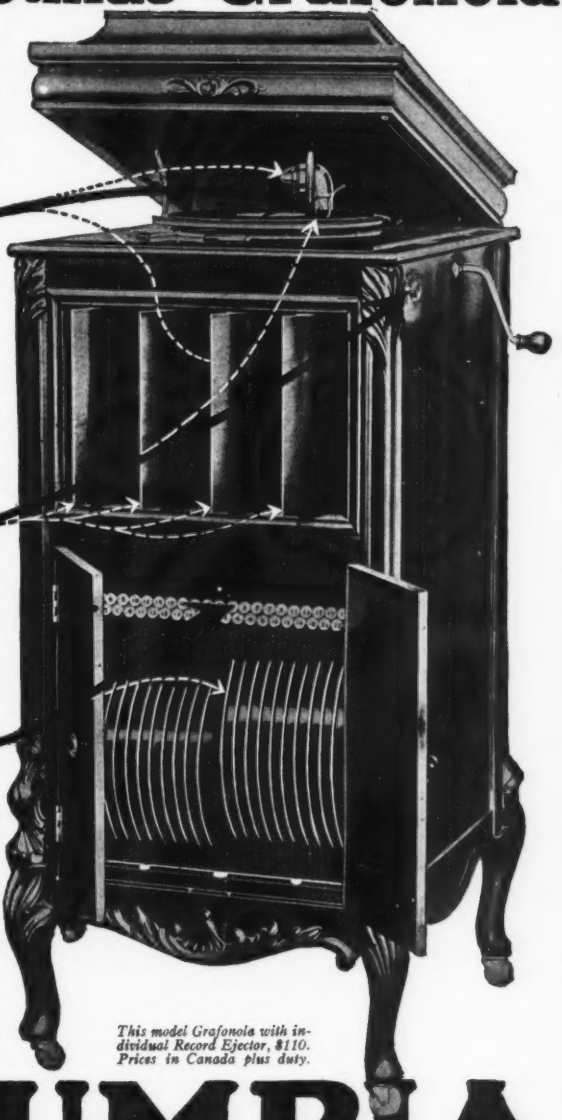

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Gentlemen: Please send me, without cost, or obligation on my part, literature and information relative to items numbered below.

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Dr.....

Address.....

Remarks.....